

FLORIDA HIGHWAYS



State Road No. 4 in New Smyrna.

Vol. IV

FEBRUARY, 1927

No. 2

**\$1.00
Per Year**

Published by the State Road Department

**Single Copies
10c**

INTERNATIONAL MOTOR TRUCKS

FOR
ROAD WORK

An Investment
in Well Established
Transportation Equipment

DURABLE
LOW-COST
DEPENDABLE

International Harvester Co.
OF AMERICA

434 E. Bay St.

Jacksonville, Fla.

SLAG

For any Type of Concrete Paving or
Surface Treatment

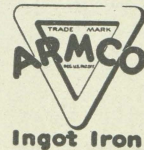
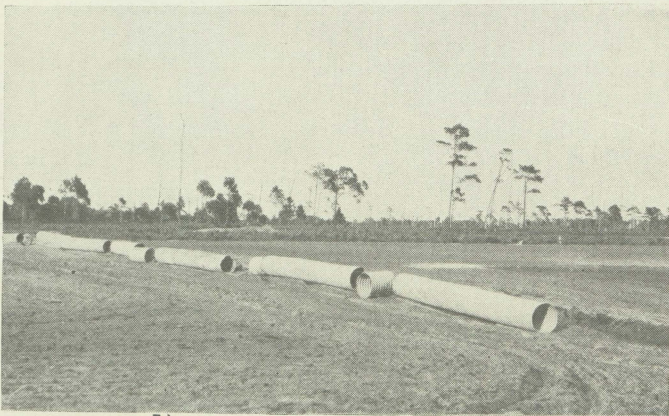
Our Woodward Plant (destroyed by fire July 6th, 1926) has been rebuilt with the most modern Crushing and Screening equipment. This new plant is producing a material unexcelled in correct and uniform sizing.

Our daily capacity from two plants is 3,000 tons, and in addition thereto, we have storage facilities for taking care of rush or emergency orders.

Write or telegraph for delivered prices.

Woodstock Slag Corporation

807-8-9 Southern Railway Building
BIRMINGHAM, ALABAMA



ARMCO, of course!

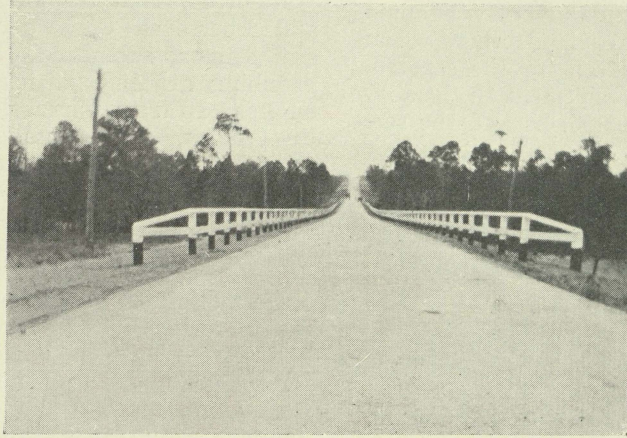
When 150 feet of 18" Armco Culvert was laid in this small creek at Venice, Florida, the work took about one-sixth the time that would have been needed to install rigid type of pipe—and the engineers knew they were installing the culvert of greatest permanency.

For strength, long life and low cost, use ARMCO for road culverts.

For Information, Write

DIXIE CULVERT & METAL COMPANY
JACKSONVILLE, FLORIDA

FLORIDA HIGHWAYS



Vol. IV

FEBRUARY, 1927

No. 2

Transactions at Quarterly Meeting of the State Road Department, Tallahassee, January 28, 1927

The first quarterly meeting of the State Road Department for the year 1927 was held at its offices in Tallahassee, Florida, January 28th, 1927, with the following members present: F. A. Hathaway, Chairman; E. P. Green, W. J. Hillman, I. E. Schilling and J. Harvey Bayliss. J. L. Cresap, State Highway Engineer; B. A. Meginniss, Attorney for the Department; W. P. Bevis, Acting Secretary, and H. J. Morrison, Highway Engineer for the U. S. Bureau of Public Roads, were also in attendance.

F. A. Project 48, Road 4, St. Johns County

Messrs. J. M. Johnson and Young and Rusk, of J. M. Johnson Construction Company, appeared before the Department with reference to the bid of that Company for the construction of the above mentioned project submitted on January 26th.

Messrs. J. F. Morgan and W. C. Copeland, of Morgan Hill Paving Company, were requested to come before the members and explain their request that their bid submitted in connection with the same project, be withdrawn. Mr. Morgan stated to the Department that after refiguring his bid, although it was not the lowest received, he had come to the conclusion that no profit could be made on the job at the figure submitted by his company.

Mr. Hillman moved that the bid of J. M. Johnson Construction Company in the sum of \$308,757.88, which is the low bid submitted, be accepted; which motion was duly seconded by Mr. Green. The motion did not prevail.

Whereupon, on motion of Mr. Bayliss, seconded by Mr. Schilling, and unanimously carried, the bid of H. E. Wolfe, of St. Augustine, for the construction of a surface-treated lime rock base on the above project, in the sum of \$336,593.48, was accepted and contract awarded to the said H. E. Wolfe.

Projects 693 and 694, St. Lucie and Martin Counties

The Department heard Messrs. J. P. Nelson, of Nelson Brothers, Clearwater, and George Drake, of Johnson, Drake & Piper, Miami Beach, relative to their respective bids on the above-named projects.

Project 693, Road 4, St. Lucie County

On motion of Mr. Schilling, seconded by Mr. Green, the following resolution was unanimously adopted:

Resolved, That the bid of Johnson, Drake & Piper, Miami Beach, submitted on January 26th for the construction of a plain cement concrete pavement on the above project, in the sum of \$284,239.02, be

and the same is hereby accepted and that the contract therefor be and the same is hereby awarded to said firm.

Project 694, Road 4, Martin County

On motion of Mr. Schilling, seconded by Mr. Green, the following resolution was unanimously adopted:

Resolved, That the bid of Nelson Brothers, Clearwater, submitted on January 26th for the construction of a plain cement concrete pavement on the above project, in the sum of \$250,168.46, be and the same is hereby accepted and that the contract therefor be and the same is hereby awarded to said firm.

Project 664, Road 3, Clay County, Doctor's Inlet Bridge, and Project 665, Road 3, Clay County, Black Creek Bridge

On motion of Mr. Schilling, seconded by Mr. Bayliss, and unanimously carried, the following resolution was adopted:

Resolved, That the bids of Concrete Steel Bridge Company of Florida, Miami Beach, submitted on Jan. 26th for the construction of reinforced concrete bridges on precast concrete piles over Doctor's Inlet and Black Creek, and known as projects 664 and 665, in the respective sums of \$214,879.00 and \$189,243.60, be and the same are hereby accepted and that the contracts therefor be and the same are hereby awarded to said firm.

Project 640-B, Road 4, Martin County

On motion of Mr. Schilling, seconded by Mr. Bayliss, the following resolution was unanimously adopted:

Resolved, That the bid of Royce Kershaw, Inc., St. Augustine, submitted on January 26th for the construction of a reinforced concrete overhead on Road 4, Martin County, known as Project 640-B, in the sum of \$29,274.00, be and the same is hereby accepted and that the contract therefor be and the same is hereby awarded to said firm.

Project 40-B, Road 4, Brevard County

On motion of Mr. Schilling, seconded by Mr. Bayliss, the following resolution was unanimously adopted:

Resolved, That the bid of F. M. Stuart, Inc., Jacksonville, submitted January 26th, for the construction of a reinforced concrete bridge across Turkey Creek, on Road 4, in Brevard County, known as Project 40-B, in the sum of \$36,499.92, be and the same is hereby accepted and that the contract therefor be and the same is hereby awarded to said firm.

Project 641, Road 4, Palm Beach County

On motion of Mr. Schilling, seconded by Mr. Bayliss, the following resolution was unanimously adopted:

Resolved, That the bid of Langston Construction Company, Orlando, submitted January 26th for the construction of a surface treated 8-inch Florida lime rock base on Road 4, from Kelsey City to Jupiter, in Palm Beach County, known as Project 641, in the sum of \$171,162.92, be and the same is hereby

accepted, and that the contract therefor be and the same is hereby awarded to said firm.

Project 685, Road 10, Franklin County

On motion of Mr. Bayliss, seconded by Mr. Green, the following resolution was unanimously adopted:

Resolved, That the bid of Dean and Yarborough and Ebersbach Construction Company, Bradenton and Tampa, submitted January 26th for clearing, grubbing, grading and necessary drainage structures on Road 10 from Carrabelle to East Point in Franklin County, in the sum of \$145,437.15 be and the same is hereby accepted and that the contract therefor be and the same is hereby awarded to the said firm.

Project 695, Road 2, Lake County

On motion of Mr. Green, seconded by Mr. Bayliss, the following resolution was unanimously adopted:

Resolved, That the bid of Samuel Vadner, Tampa, for the grading, and the bid of Tampa Sand & Shell Company, Tampa, for the hydraulic fill, submitted January 26th for clearing, grubbing and grading and hydraulic fill on Road 2, from Silver Lake Forks to Leesburg, in Lake County, known as Project 695, in the respective sums of \$57,940.63 and \$57,607.53, be and the same are hereby accepted, and that contracts be and the same are hereby awarded to the said Samuel Vadner and the said Tampa Sand & Shell Company for the said grading and the said hydraulic fill, respectively.

Project 669-B, Road 27, Dade County

On motion of Mr. Schilling, seconded by Mr. Green, the following resolution was unanimously adopted:

Resolved, That the bid of R. C. Huffman Construction Company, Coral Gables, submitted January 26th, for clearing, grubbing and grading Road 27, in Dade County, from the end of Project 669-C to the Monroe County line, in the sum of \$347,307.60, be and the same is hereby accepted and that the contract therefor be and the same is hereby awarded to said firm.

At this juncture the Department recessed for lunch, reassembling at two o'clock P. M., present as at morning session.

Pinellas County

The Board of County Commissioners of Pinellas County, accompanied by the Clerk of the Circuit Court and the County Engineer, were present and expressed their appreciation of the Department's former action in taking over for maintenance Roads 15 and 17, built by the county and assured the Department of its co-operation and appreciation of the fine work the Department is doing in its big road-building program.

Jefferson and Taylor Counties, Florida, and Thomas County, Georgia

A delegation from the counties of Taylor and Jefferson, Florida, and Thomas, Georgia, appeared before the Department requesting assistance in a number of proposals. Senator T. T. Turnbull, of Jefferson County, headed the delegation and introduced the delegates. Senator B. H. Lindsey, Chair-



Project 545, Road 5, Hernando County. Overhead Crossing Including Approach.

man of the Board of County Commissioners of Taylor County, requested the early construction of Road 19 and a survey of the Gulf Coastal Highway in his county. He was assured by the Chairman that the construction of Road 19 has been provided for with the assistance of the counties through which it passes. Senator D. H. Finlayson, of Monticello, requested that the Department construct Road 11, which request was seconded by Chairman Pittman of the Board of County Commissioners of Thomas County, Georgia. The Chairman stated that the Department will co-operate heartily as far as it is legally possible for it to do so.

Charlotte County

Messrs. H. W. Smith, Punta Gorda, County Commissioner, and W. L. Johnson and C. L. Babcock, also of Punta Gorda, appeared before the Department. Mr. Smith requested that the Department undertake the hardsurfacing of Road 2, from Dorr Field to the Lee County line, and Mr. Johnson asked that the Department construct a new bridge over Peace River on Road 5. The latter was informed by the Chairman that this project will be included in the 1927 budget of work and that the Department will undertake its construction as early as possible.

Hillsborough County

Messrs. W. T. Williams, Chairman, and John T. Gunn, James N. Holmes, J. R. Hendry and W. T. Watkins, members of the Board of County Commissioners of Hillsborough County, accompanied by their attorney, Thomas M. Shackleford, Jr., placed before the Department the following requests: That the Department construct Road 17 from the Polk County line to Tampa; that it take over for maintenance the remainder of Road 5 in Hillsborough

County. The Chairman stated that the Department's program for the construction of Road 17 is proceeding satisfactorily and that he will make an inspection of the remainder of Road 5 on an early visit.

Sarasota County, Road 5

Mr. John H. Carter, Jr., County Attorney of Sarasota County, requested the Department to adopt a resolution fixing the amount of the County's participation in the construction of Road 5, from the north city limits of Sarasota to the Manatee County line.

On motion of Mr. Green, seconded by Mr. Schilling, the following resolution was unanimously adopted:

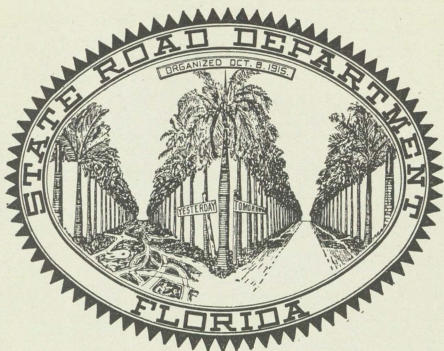
Whereas, The State Road Department of Florida heretofore determined to grade, drain and pave to a width of 18 feet that portion of State Road No. 5, lying between the north city limits of the City of Sarasota and the boundary line dividing Sarasota and Manatee counties;

And, Whereas, after it was determined to so construct said road to the width of 18 feet the County of Sarasota asked the Department to construct same to a width of 30 feet, said Sarasota County agreeing to bear the cost of the additional 12 feet of construction;

And, Whereas, in pursuance to such determination a contract was entered into by this Department for the construction of said road, the total contract cost being \$261,832.53, of which \$128,687.63 represents the cost of the 18-foot width to be paid for by this Department, and \$133,144.90 the cost of the additional 12 feet to be paid for by Sarasota County;

And, Whereas, in pursuance to such agreement this Department did proceed with the construction

(Turn to page 5)



Florida Highways

Published Monthly
Official Publication of the State Road Department

PERSONNEL OF DEPARTMENT

F. A. HATHAWAY (*Jacksonville*), *Chairman*
(*Official Residence, Tallahassee.*)

E. P. GREEN, *Bradenton*

W. J. HILLMAN, *Live Oak*

J. HARVEY BAYLISS, *Pensacola*

I. E. SCHILLING, *Miami*

WALTER P. BEVIS, *Tallahassee, Acting Secretary.*

PERSONNEL OF EMPLOYEES IN GENERAL CHARGE OF THE WORK OF THE DEPARTMENT

Engineering Division

J. L. Cresap, Tallahassee.....	State Highway Engineer
L. K. Cannon, Tallahassee.....	Ass't. State Highway Engineer
G. L. Derrick, Tallahassee.....	Bridge Engineer
C. W. DeGinther, Tallahassee.....	Ass't. Bridge Engineer
Harvey A. Hall, Gainesville.....	Testing Engineer
F. W. Berry, Jr., Tallahassee.....	Office Engineer
John R. Stewart, Gainesville.....	Supt. of Equipment
R. L. Bannerman, Marianna.....	Div. Engr.—1st Div.
J. H. Dowling, Lake City.....	Div. Engr.—2nd Div.
R. J. Cassie, Fort Pierce.....	Div. Engr.—3rd Div.
L. B. Thrasher, Ocala.....	Div. Engr.—4th Div.
A. W. Kinney, Lakeland.....	Div. Engr.—5th Div.
R. C. Fergus, Fort Lauderdale.....	Div. Engr.—6th Div.
Henry Wilson, Punta Gorda.....	Div. Engr.—7th Div.

Accounting Division

S. L. Walters, Tallahassee.....	Accountant
---------------------------------	------------

B. A. Meginniss, Attorney for the Department,
Editor and Business Manager

Volume IV February, 1927 Number 2



THE 1927 BUDGET

On another page of this issue we present the tentative budget of maintenance and construction work which the Department proposes to undertake during 1927. It is, of course, as yet, but tentative, since under the law a public hearing thereon must be had before its final adoption, but it is not believed that any material changes will be made. We hope that it will be carefully studied by all interested in Florida's roads and in connection with the table of estimated resources which appears on still another page of this issue.

On Friday, March 25th, the Department will meet in Jacksonville to hold the public hearing required by law to hear complaints and suggestions as to its proposed budget. Meanwhile the budget is being advertised and is posted at the door of each court house in Florida. The Department hopes that the citizens will give it careful and earnest consideration.

NOW THIS IS GRATIFYING

The favorable notice which Florida receives from tourists from other states was never more strongly evidenced than in the following letter which has just been received, and for which we extend hearty thanks and appreciation:

THE MOTOR LEAGUE OF LOUISIANA

New Orleans, La.

February 10th, 1927.

Florida Highway Commission,
Tallahassee, Fla.

Gentlemen:

One of our Directors, John A. Saxton, made a recent trip with the Realtors Motorcade to Miami, Florida, and has brought back glowing accounts of the roads through Florida, and made special mention of the wonderful manner in which these roads are marked, suggesting that we endeavor to have the Highways of Louisiana marked in a similar manner.

Therefore, if it is consistent with your policy, we would appreciate your sending us one of your markers so that we can show it to the Louisiana Highway Commission, after which we would like to display this marker in our headquarters.

Thanking you for your consideration and assuring you of our hearty co-operation, we are,

Yours very truly,

THE MOTOR LEAGUE OF LOUISIANA.

(Signed) C. GORDON RAILEY, Mgr.

All the Trimmings

Auctioneer: "A fine old Queen Anne mirror. A real antique. What am I offered for it?"

Near-sighted Lady: "Is it cracked?"

Auctioneer: "No, ma'am, but we can crack it for you."—Lampoon.

Bubbling Eloquence

Drowning man: "Uh—blub—elp—lub—ublubs."

Drowsy Bystander: "You said a mouthful, brother."—Notre Dame Juggler.



Beautiful Scene On Road 2, Approaching County Bridge Over Santa Fe River.

TRANSACTIONS OF QUARTERLY MEETING

(Continued from page 3)

of said portion of State Road No. 5 to a width of 30 feet, which construction has been completed at this time;

And, Whereas, this Department now desires to make formal demand upon Sarasota County for its share of the cost of such construction, the actual cost thereof being \$261,832.53, and Sarasota County's share being \$133,144.90;

Therefore, Be It Resolved by the State Road Department of Florida, and it hereby determines that the contract cost of the entire work was \$261,832.53, of which \$128,687.63 represents the cost of the 18-foot width to be constructed by the State Road Department, and \$133,144.90, the cost of the additional 12 feet, to be paid by Sarasota County; and inasmuch as said work is now completed it is hereby determined that the actual cost of the entire work was \$261,832.53, of which \$128,687.63 represents the cost of the 18-foot width to be paid for by the State Road Department, and \$133,144.90 the cost of the additional 12 feet to be paid for by Sarasota County.

Be It Further Resolved, That formal demand upon Sarasota County for said \$133,144.90 be and the same is hereby made, and the Secretary of this Board is hereby directed to make demand upon Sarasota County through its Board of County Commissioners for said sum, and that a copy of this resolution be sent with such demand.

Tentative Budget—1927

On motion of Mr. Hillman, seconded by Mr. Schilling, the following resolution was unanimously adopted:

Resolved, That the proposed Budget of Mainte-

nance and Construction Work for the year 1927 as prepared by the members of the Department, and on file in the office of the Department, be and the same is hereby tentatively adopted;

Be It Further Resolved, That Friday, March 25th, 1927, be fixed and designated as the time, and Jacksonville, Florida, as the place for the public hearing as to the proposed budget of work, at which time and place the Department will hear all complaints and suggestions offered by the public as to any changes in said budget, and

Be It Further Resolved, That the Chairman be and he is hereby authorized and directed to have published in one newspaper in each of the cities of Pensacola, Jacksonville, Orlando, Tampa and Miami, the said proposed budget of work and estimate of revenue, together with the time and place for said hearing as directed by statute.

Project 592

Upon motion of Mr. Bayliss, seconded by Mr. Schilling, and unanimously carried, the following resolution was adopted:

Whereas, It appears that on Nov. 17th, 1926, J. L. Cresap, State Highway Engineer, in compliance with the provisions of Paragraph 59 of the contract entered into on August 14th, 1926, between Bennett Construction Company and this Department for the construction of Project 592, being approximately 7.89 miles between Apalachicola and the Gulf County line, in Franklin County, notified said contractor and United States Fidelity and Guaranty Company, the surety on its bond, that there was delay, neglect and default in said contractor's contract with the Department, specifying in said notice the said delay, neglect and default; and

Whereas, It further appears that said State Highway Engineer did thereupon give notice in writing to said contractor and said surety of such delay, neglect and default and did notify and advise said contractor and said surety that if within a period of ten (10) days after such notice said contractor should not proceed in accordance therewith, said Engineer would make written certificate to this Department of the fact of such delay, neglect and default and that this Department would thereupon take the prosecution of said work out of said contractor's hands and appropriate and use any and all materials and equipment on the ground as may be suitable and acceptable and proceed further to use such method as in said paragraph of said contract outlined as shall be required for the completion of said contract in an acceptable manner; and

Whereas, Said Engineer has officially advised this Department that said contractor did not, within a period of ten days after such notice, proceed in accordance therewith, and that such delay, neglect and default has continued and still continues, and has officially certified to this Department the fact of such delay, neglect and default and the contractor's failure to comply with such notice, and has recommended that the prosecution of said work be taken out of the hands of said contractor, the said Bennett Construction Company, and that the Department appropriate and use any and all materials and equipment on the ground as may be found suitable and acceptable and proceed further to use such method as in said paragraph of said contract outlined as shall be required for the completion of said contract in an acceptable manner.

Now, Therefore, Be It Resolved: By the State Road Department of the State of Florida, that the said contract between the said Bennett Construction Company and this Department, be and the same is hereby declared annulled, forfeited and in default; and

Be It Further Resolved: That in compliance with the provisions of paragraph 59 of said contract, the prosecution of said work be and the same is hereby taken out of the hands of said contractor, and that the Department appropriate and use any or all materials and equipment on the ground as may be suitable and acceptable for the prosecution of said work; and

Be It Further Resolved: That formal demand be and the same is hereby made upon said United States Fidelity & Guaranty Company, the surety on said contractor's bond, to take over the work and prosecute the same to completion and to take all necessary steps to carry out the said contract promptly.

Leon County, Road No. 19, Right of Way

Upon motion of Mr. Bayliss, seconded by Mr. Schilling, the following resolution was adopted:

Whereas, This Department has found and determined and it is hereby found and determined that it is necessary, wise and expedient to secure by eminent domain the real estate hereinafter described for the purpose of a right of way for State Road No. 19, through Leon County, Florida; and

Whereas, There has been prepared and submitted a map or plat which shows in detail the location of said State Road No. 1, which said map or plat is hereto attached and marked exhibit "A";

Now, Therefore, Be It Resolved, That the said

map or plat be and the same is hereby adopted and approved as and for the location of said State Road No. 19 through Leon County; and

Be It Further Resolved. That the Board of County Commissioners of Leon County be and they are hereby requested and authorized to secure for this Department by purchase or condemnation the lands necessary for a right of way for said State Road No. 19 and, particularly, the lands described as follows, to-wit:

Commence at the S. W. corner of the N. W. $\frac{1}{4}$ of the N. W. $\frac{1}{4}$ of Section 12, Township 1 S., Range 2 E. Run thence E. 520 feet to the center of the Monticello-Newport road; thence N. $41^{\circ}00'$ E. 416.4 feet to the point of beginning, said point being on the south right of way line of State Road No. 19. Run thence N. $55^{\circ}07'$ W. 317.0 feet to the point of curve of a $1^{\circ}30'$ curve to left; thence continuing in a northwesterly direction along said curve 644 feet to the west boundary of said section 12; said point being 807.5 feet north of the S. W. corner of the N. W. $\frac{1}{4}$ of the N. W. $\frac{1}{4}$ of said section 12; run thence north 76.9 feet to the north right of way line of said Road No. 19; thence in a southeasterly direction along said $1^{\circ}30'$ curve to right 664 feet to the point of tangency of said curve; thence S. $55^{\circ}07'$ E. 321 feet to the center of said Monticello-Newport Road; thence S. $41^{\circ}00'$ W. 66.0 feet to the point of beginning; containing 1.5 acres more or less, belonging to one J. T. Nasworth.

Be It Further Resolved, That said County Commissioners be and they are hereby authorized to use the name of this Department in any condemnation proceedings necessary to carry out the purposes of this resolution, or to proceed in their own name as authorized by law; and

Be It Further Resolved, That in the event that they shall elect to proceed in the name of this Department that their attorneys be and they are hereby authorized to prepare, execute and file all necessary pleadings, affidavits and documents in connection therewith.

Union County, Road No. 56, Right of Way

On motion of Mr. Hillman, seconded by Mr. Schilling, the following resolution was adopted:

Whereas, This Department has found and determined and it is hereby found and determined that it is necessary, wise and expedient to secure by eminent domain the real estate hereinafter described for the purpose of a right of way for State Road No. 56 through Union County, Florida; and

Whereas, There has been prepared and submitted a map or plat which shows in detail the location of said State Road No. 56, which said map or plat is hereto attached and marked exhibit "A";

Now, Therefore, Be It Resolved, That the said map or plat be and the same is hereby adopted and approved as and for the location of said State Road No. 56 through Union County; and

Be It Further Resolved, That the Board of County Commissioners of Union County be and they are hereby requested and authorized to secure for this Department by purchase or condemnation the lands necessary for a right of way for said State Road No. 56 and, particularly, the lands described as follows, to-wit:

A strip of land on the south side of the south half of Lot 7, Section 30, Township 5 South, Range 20

East, being further described as follows: Beginning at a point 12 feet north of the S. W. corner of Section 30, Township 5 South, Range 20 East and running East 235 feet, thence North 87° East 1,085 feet, thence North 20 feet, thence West 1,320 feet, thence South 66 feet to point of beginning, containing in all 1.4 acres, more or less.

Be It Further Resolved, That said County Commissioners be and they are hereby authorized to use the name of this Department in any condemnation proceedings necessary to carry out the purposes of this resolution, or to proceed in their own name as authorized by law; and

Be It Further Resolved, That in the event that they shall elect to proceed in the name of this Department that their attorneys be and they are hereby authorized to prepare, execute and file all necessary pleadings, affidavits and documents in connection therewith.

Alachua County, Road No. 5, Special Road and Bridge District No. 8

On motion of Mr. Hillman, seconded by Mr. Schilling, the following resolution was adopted:

Whereas, Special Road and Bridge District No. 8 of Alachua County has issued \$200,000.00 of bonds to be used in the construction of State Road No. 5 in said district; and

Whereas, The Trustees of said district and the County Commissioners of said county, under the provisions of Chapter 8553, Laws of Florida, 1921, have voted to transfer and deliver to this Department the said bonds at the par or face value thereof, the

proceeds to be used toward the construction of State Road No. 5 within said district; and

Whereas, The Department has agreed to accept said bonds and to use the proceeds thereof in the construction of said road in said district;

Now, Therefore, Be It Resolved, By the State Road Department of the State of Florida that the Department does hereby agree, in writing, to expend and use and employ as much or more than the par or face value of said bonds in the construction of said State Road No. 5 within said Special Road and Bridge District in Alachua County.

Be It Further Resolved, That the provisions of this resolution are conditioned upon said District transferring and delivering the said bonds to the Department as and for a sale and delivery of said bonds, the same to be and become thereafter the property of this Department for sale, disposition and delivery.

Award of Contracts

On motion of Mr. Bayliss, seconded by Mr. Green, the following resolution was unanimously adopted:

Whereas, Bids were asked by this Department for the construction of the projects hereinafter designated, and

Whereas, The firms and individuals respectively named were the successful bidders thereon; Now, Therefore,

Be It Resolved, That the action of the Chairman in awarding and executing the contracts hereinafter named be, and the same is hereby, approved and confirmed; which said contracts are as follows, to-wit:

Project No.	Contractor—	Road No.	County—	Length	Type	Contract Cost
682	The Erler Corporation.....	5	Citrus	247 ft.	Conc. & Steel....	\$ 45,976.28
677-B	Coastal Const. Co.....	13	Levy	11.58	C. G. & G.....	146,624.88
691	Mason Payne Co., Inc.....	4	Indian River	5.52	C. G. & G.....	86,489.92
692	Boone & Wester.....	4	St. Lucie	7.38	C. G. & G.....	118,627.15
676-A	L. M. Gray.....	19	Levy	9.96	Rock Base	129,412.84
676-B	L. M. Gray.....	19	Levy	14.39	Rock Base	186,785.28
46	McMahan Bros. Const. Co.....	3	Nassau	11.51	Concrete	305,558.98
47	J. B. McCrary Engr. Co.....	4	St. Johns	14.96	Concrete	391,761.02
674	Nelson Bros.	1	Duval	3.50	Concrete	115,553.64
571	Duval Engr. & Contr. Co.....	1	Madison	14.26	Rock Base	215,262.90
37-D	L. M. Gray.....	2	Alachua	2.14	Rock Base	29,630.98
648	W. P. McDonald Const. Co.....	2	Hardee	7.14	Rock Base	95,612.10
587	C. G. Kershaw Const. Co.....	5-A	Columbia	4.37	C. G. & G.....	24,706.10
718	C. G. Kershaw Const. Co.....	5-A	Columbia	8.22	C. G. & G.....	63,170.00
640-A	S. J. Groves & Sons Co.....	4	Martin	9.00	C. G. & G.....	73,739.24
640-B	Lake Worth Const. Co.....	4	Martin	11.80	C. G. & G.....	114,319.58
653	H. D. Spangler.....	4	Broward	13.46	C. G. & G.....	69,069.36
698	Curtis & Gubbins.....	19	Leon	12.43	C. G. & G.....	139,715.73
621-D	Montgomery & Parker.....	1	Okaloosa	29 ft.	Conc. Bridge	19,068.58
682	W. C. Shepherd.....	5	Citrus	0.1	Raising Fill.....	11,250.00
589-564-B	H. E. Wolfe.....	5	Lee-Charlotte	18.00	Surf. Treatment...	54,861.95
54	Noonan-Lawrence	1	Leon	13.00	Concrete	350,262.61
59	Higgison Const. Co.....	1	Jefferson	9.10	Concrete	241,866.70
54-A-59	Duval Engr. & Contr. Co...	1	Jefferson-Leon	12.53	Rock Base	240,476.80
53-A	Manley Constr. Co.....	2	Lake	7.10	Bit. Concrete	226,394.80
52	W. J. Bryson Paving Co.....	1	Escambia	10.08	C. G. & G.....	219,913.18
677-C	Boone & Wester.....	13	Levy	10.16	C. G. & G.....	203,950.89
677-D	Thompson & Moseley.....	13	Levy	7.58	C. G. & G.....	60,015.77
683-C	Lake Worth Const. Co.....	4	Palm Beach	8.27	C. G. & G.....	40,264.50
687-B	B. Booth & Co.....	2	Lake	15.22	C. G. & G.....	81,360.85
50-A	C. T. Dawkins.....	14	Putnam	120 ft.	Concrete	20,221.20
655-667	Okeechobee Const. Co.....	18	Highlands-DeSoto ..	915 ft.	Timber	45,460.50
697	C. H. Turner Const. Co.....	1	Escambia	488 ft.	Timber	20,828.67

Expense Accounts

On motion of Mr. Schilling, seconded by Mr. Green, the expense accounts of the members were approved

and ordered paid. There appearing no further business, the Department was adjourned at four o'clock p. m.



North Bay, St. Andrews Bay, Bay County.

Cooperative Road Building By State and National Governments

By W. M. Jardine, Secretary of Agriculture.

An Address Delivered Before the American Association of State Highway Officials in Annual Session at Pinehurst, N. C., November, 1926.

THE decade just past has been marked by greater improvement of the roads of the United States and a larger increase in transportation than any other in the history of the country. As, from our present position, we look back upon the way we have come in these 10 years the progress seems truly remarkable. Coincidentally this same period covers the span of the Federal aid road legislation and its administration under the Department of Agriculture.

As we entered the decade in 1916 there were less than 2,500,000 motor vehicles in the entire country and less than 73,000 of these were registered as motor trucks. Today the trucks alone are more numerous than all motor vehicles at that time, and the total has doubled and twice redoubled in the 10-year period.

In 1916 there were approximately 277,000 miles of surfaced roads in the entire country, only a small percentage of which were of the types now regarded as adequate for motor vehicle traffic. Today the mileage of surfaced roads is nearly if not quite twice as great as it was 10 years ago and more than 100,000 miles are improved with types of surface more satisfactory for service than waterbound macadam—a record of progress the more remarkable if it is remembered that during this same 10-year period it

has been necessary to reconstruct a very large part of the mileage previously constructed.

Ten years ago there was only five States in which there was as much as a single improved transstate highway. They were Massachusetts, Connecticut, New York, New Jersey, and Maryland—all eastern States and all of that small group in which the movement for better highways had been begun in the nineties. Today 25 States have improved highways continuous from border to border in at least one direction and 16 of these have completed such transstate arteries in two directions.

In 1916 there were 16 States in which there was no State highway department that could be recognized as competent to administer the construction of Federal-aid roads, nor the semblance of a plan for the development of a State system of highways, and even in those States in which the recently created State agency was endeavoring to introduce scientific and businesslike methods of highway improvement there were only a few in which a connected State highway system had yet been clearly conceived. Today there is in every State a definitely designated State highway system to the improvement of which the State governments are applying their resources.

These remarkable changes, occurring within the brief period of 10 years, distinguish the last decade



Project 646, Road 10, Franklin County. Sand Clay Surface Between Lanark and Carrabelle.

as the most important in highway history; but the developments which are destined to have the most far-reaching influence upon the future are the establishment of the Federal-aid policy and the elaborate and productive researches which have been carried out by the Federal and State departments and other agencies.

Of the Federal-aid policy it may be said that the 56,000 miles of road which have been improved under it are of less significance than the principles upon which the policy is founded, and which are thus given Nation-wide importance.

It is a first principle of the Federal-aid policy that all roads, by the nature of their traffic, are stamped as of local, State, or interstate importance, and that this fact should be recognized in the administration and financing of their improvement. The law has, therefore, required the designation of a definite Federal-aid highway system including those roads of interstate importance in the improvement of which the national and State governments may properly combine their efforts.

From the first it has been required that the State should, itself, participate directly with the Federal agency through a department of its government competent to assume the responsibility. In retrospect, this provision of the law appears as, perhaps, the most important Federal contribution, responsible, as it doubtless was for the creation and strengthening of highway departments in many of the States. It is a notable fact that these organizations are among the most efficient of State institutions, and it is certain that to them must be ascribed the largest measure of credit for the remarkable improvement of our highways. There is gratification, also, in the splendid co-operation which has at all times marked their relations with the Bureau of Public Roads.

The importance of the contribution to engineering science which have resulted from the research and experimentation that has been so vigorously conducted since 1920 can scarcely be over-emphasized. The Bates road tests by the Illinois department, the Pittsburg, California, experiments and the various tests of the Bureau of Public Roads are known and studied throughout the world. By the general adoption of the thickened-edge section, a direct result of this research, the public has already benefited through increased service and lower costs, and the saving will go on as long as concrete roads are built.

As the result of a single study completed recently by the Bureau of Public Roads by which it has been demonstrated that brick of 2 and 2½ inches in thickness may be used to give the service for which 3 and 4-inch brick have previously been used, it is estimated that large annual savings are possible. A few thousand dollars and the earnest and devoted work of three or four of the Bureau's engineers for less than a year have thus returned to the taxpayers of the States and municipalities, wherever brick pavements are built, many times the expenditure in potential cost reduction.

Similarly the Bureau's studies of grading and concrete pavement operations have pointed the way to an improvement in the efficiency of such operations as a result of which it has been found possible in some cases with the same equipment to increase production by 50 to 100 per cent.

The results of these studies are immediately apparent in reduced costs and enhanced efficiency. In other cases, as in the studies of soils to determine their characteristics as highway subgrades and in the various investigations of the effect upon roadways of traffic and climatic influences, the object

sought is complicated by so many variable factors that the studies must be long continued before definite results may be expected. But these researches, penetrating as they do to the very fundamentals of highway design, are likely in the end to be the most valuable of all, and it is not only possible but probable that future generations of road builders may regard them as in the same category as those fundamental observations by which the design of bridges has been converted from a rule-of-thumb process into an exact and dependable science.

Turning from retrospection to the contemplation of the future, I am impressed with the necessity of making adequate provision for the increasing service that will be expected of the highways. If the number of motor vehicles has increased from two and a half to twenty million in 10 years, there is no reason to believe that the increase will be abruptly halted now, although we may expect some falling off in rate. As traffic increases directly in proportion to the motor vehicles in service we must expect that the conditions for which we now build will be intensified in the future. The highway service we are now providing must be capable of expansion to meet the needs of the growing traffic as these mature.

Doubtless the concern of the immediate future is not for all of you the same. To some it is the completion of an initial improvement of a large mileage, previously unimproved, in the face of a demand for more adequate facilities on some of the highways already well developed. To those who face this situation the problem is to get the traffic through—to effect some degree of improvement over a whole highway system as rapidly as possible in order to give the greatest satisfaction to the greatest number of people.

Others among you—more fortunate, I believe—have systems of main roads already improved and largely surfaced and the immediate concern is the selective betterment of sections of the system to relieve congestion, eliminate danger, and generally to adjust the existing improvement to the growing needs of a still increasing traffic.

To all alike, however, the problem of the present is to serve as adequately as possible the present needs, keeping in mind at the same time the greater needs of the future, and making suitable provision for their accommodation when the time arrives. This is the policy of stage construction, a sound policy because it recognizes the utter impossibility of building once for all a system of highways which may be regarded as a finished product, but rather substitutes for that conception the principle of progressive improvement.

The construction of earth roads on the lines and grades and with the drainage provisions that will be required by the pavement of the future is a recognized application of the stage-construction principle. But it has much wider applications than that. The acquisition of rights of way of ample width for the future so that, when the need arises, it will be possible without heavy expense or the injury of private property to effect the necessary improvements, is another highly important application. The same foresighted policy suggests the location of the improved highways in relation to railroads at crossings in such manner as to provide satisfactorily for sep-

aration of grades, and it applies also to provisions for the construction of future by-pass highways around cities, and for the diversion of traffic from routes of growing congestion.

To anticipate thus the needs of the future implies a knowledge of the probable traffic importance of the various roads which can only be obtained by a careful and detailed study of the present distribution and the factors inherent in the economic and physical characteristics of the State. Such studies have been made by the Bureau of Public Roads in co-operation with the highway departments of a number of the States, and the reports, recently published, are doubtless familiar to many of you.

The highway department that has in its possession such information as these surveys supply can really plan for the future. It has substituted facts for opinions; it knows the present and probable future importance of its roads; it knows the density and also the weight of the traffic to which each road is now subjected and to which it is likely to be subjected in the near future. It can, therefore, devise a reasonable program of construction extending into the future; it can budget its funds intelligently; it can determine the order in which the various highways should be improved and give a satisfactory answer to those who favor priority for other roads; and it has in its possession an adequate basis for the necessary decision as to the character of improvement required for each road.

This is sound and businesslike administration of highway improvements. It is the reverse of the casual and haphazard procedure which too often has subjected the business of highway improvement to political manipulation, and produced discontinuous, unbalanced, and uneconomical development instead of well articulated systems of improved highways.

In the Federal-aid work we feel the need of such precise information daily and I look forward hopefully to a not far distant time when it will be available in all States.

Not all the exact information it is possible to obtain, however, will suffice to provide an orderly and systematic improvement of the main roads in the States which still rely upon the financial assistance of the counties to carry out the State program. Certainly there has been experience enough to prove that complete connection of main arteries is practically impossible so long as there is dependence upon county financing. The reasons are perfectly obvious. All sections of the major State roads in the various counties are not invariably the roads in which the county interest is the greatest. By their very nature the roads of the State and Federal-aid systems are the most heavily traveled highways. In many instances the traffic which demands their improvement is contributed in a smaller degree by counties through which they pass than by other counties or even other States. It is not unnatural that the authorities of such counties should be unwilling, and they often are financially unable, to assume a share in the cost of the improvement. So long as any State fails to provide State funds for such roads the development of the main State and interstate roads along strictly economic lines will be hampered.

Full operation of the provision of the Federal highway act which aims to correct this condition has been twice deferred in the Federal legislation

to give the States concerned more time to correct their laws. There ought to be no further delay. I am sure that the members of this organization from the affected States will join with me in the hope that the necessary laws and constitutional amendments will be provided before Congress shall again have this legislation before it for further action.

It is manifestly unfair to the counties themselves to expect them to participate in the cost of improving the main lines of traffic. To do so places a burden upon them which they should not be expected to bear. The improvement and upkeep of the roads tributary to the main systems are of the highest importance to agriculture and the county and local funds must be preserved for this purpose. The traffic on the State roads is a wide-ranging traffic. The greater part of it originates in and is destined to the cities, and any system which causes the rural communities to contribute to the expense of improvement in greater proportion than the benefits they derive is unfair and ought to be remedied.

Looking to the future also there must be a still greater improvement in the maintenance of all roads and especially of the Federal-aid roads, an obligation which the Federal law places upon the State highway departments. While unquestionably there has been great improvement in this respect during the last decade, the failure to make proper provision for the repair of roads upon which large sums of public money have been invested is the sheerest of economic folly. Unless there is positive assurance that means will be available for the constant and continuous care of the roads after they are improved, I am convinced that it would be better not to improve them at all.

It has not often been necessary to enforce the provisions of the Federal highways act in respect

to non-performance of the necessary maintenance work on Federal-aid projects. With few exceptions the obligations of the States has been carried out. There are a few—no more than can be counted upon the fingers of one hand—upon whom it has been necessary to call repeatedly for essential work to save the Federal-aid roads from deterioration. The Department has been patient in dealing with such cases and our requests have always been met with a response but maintenance that is delayed until the deterioration has advanced to the point where it becomes necessary to direct attention to it, is not the right kind.

While the States in accepting the Federal appropriations accepted also the obligation of keeping the roads in proper repair, the deeper obligation is that of rendering the best possible service to the public and of protecting public investment. Neither the public nor the legal obligation can be satisfied by a perfunctory highway maintenance policy. The Department has endeavored to deal in a straightforward way with its duty to enforce the law in this respect. There has been no tendency to pick flaws of a minor character or to look with unsympathetic eyes upon the efforts of the States. It is not a pleasant duty to serve a formal notice required under the law upon any State, and it is still less pleasant to withdraw Federal participation. The Department believes, however, that its first duty is to insure proper maintenance of the roads constructed with Federal funds, and this viewpoint I am sure will have the unanimous support of this Association. There are a few States in which there have been too frequently reports of projects in an unsatisfactory state of maintenance, and may I take this opportunity to urge very seriously upon these States, which can not themselves be satisfied



Scene Near Lake Stearns, Highlands County.

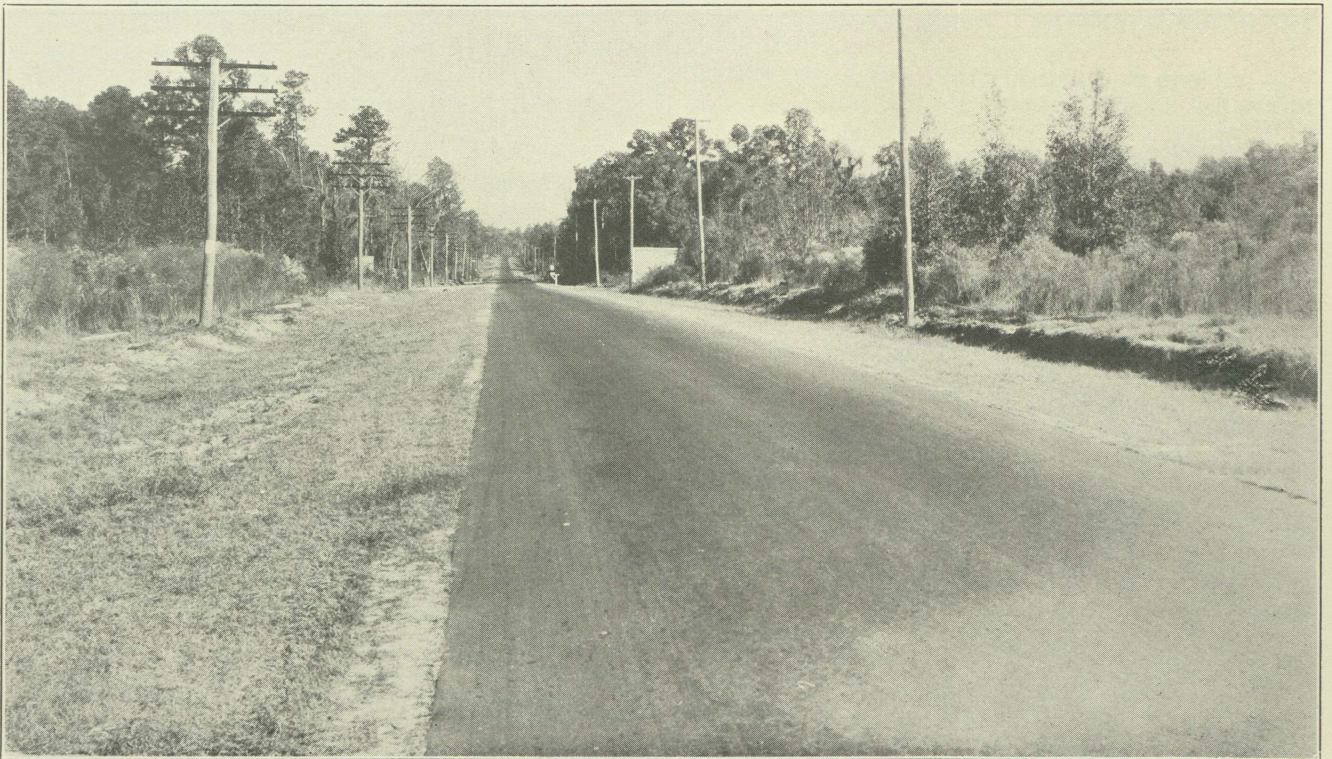
with such conditions, their immediate correction. The Department wishes to make clear its position that the duty to maintain roads already constructed is paramount.

With each year's progress now it becomes easier to see the working out of one of the primary conceptions of the Federal-aid road legislation as expressed in the requirement to expedite the completion of an adequate system of highways interstate in character. It was foreseen that the fulfillment of this purpose would come through a linking up of sections of main highways as they are developed State by State, and up to this time the programs within the States have in general been in harmony with the expected progress in the direction of through routes. In some cases the Department has taken definite positions with reference to specific projects to provide missing links, usually in the way of bridges at State boundaries, but now with the major routes of the country so clearly defined by the action of the States through this Association, the unimproved sections of these routes have been brought in strong relief. It is now possible to travel from Washington through St. Louis, Texarkana, and El Paso to San Diego, over a trans-continental route of which 97 per cent is improved, 93 per cent is surfaced and 4 per cent is graded and drained. Of the surfaced portion more than half is improved with bituminous macadam or higher cost types and the remainder is gravel. From Washington to St. Louis there is no unimproved section and nearly 96 per cent is surfaced with bituminous macadam or one of the higher type roadways. From St. Louis to Texarkana, 2 per cent of the distance is unimproved and 63 per cent is improved with a gravel surface, the rest with superior types. From Texarkana to El Paso there are unimproved sections equaling 4 per

cent of the distance, gravel surfaces 50 per cent and bituminous macadam or superior type the rest of the way. From El Paso to San Diego, with the exception of 6 per cent of the distance, the road is surfaced, 60 per cent with gravel and the remainder with pavements and surfaces of higher types.

This is the possible transcontinental route, totaling 3,133 miles, most nearly surfaced; 2,907 miles are surfaced and 131 miles are graded and drained, leaving only 95 miles without improvement. This route does not coincide with any one of the U. S. routes but it does indicate the splendid progress that has been made by the States it traverses in the completion of important trans-State routes. Considered from the standpoint of improvement, the next ranking transcontinental route is that from Atlantic City to Astoria. Of its total length of 3,240 miles, 12 per cent is still unimproved, another 12 per cent is graded and drained, and the remaining 75 per cent is improved with some form of wearing surface. Of other east and west routes, that from Norfolk to Los Angeles is 68 per cent improved and that from Chicago to Los Angeles partly by the same line is 63 per cent improved. From Boston to Seattle, through the northern tier of States, the most direct through route is 73 per cent improved and 69 per cent surfaced.

These routes are taken to illustrate the working out of the principle, as defined in the Federal highway legislation, of the completion of interstate routes. There may be critics who hold that the ten-year period covered by this legislation should have produced more transcontinental routes fully improved. There are two answers: The actual operations of the Federal highway legislation did not get under way until well into the year 1919, and the tremendous development of motor vehicular



Project 545, Road 5, Hernando County.

traffic, particularly around every center of population, large and small, local rather than trans-State in character, has necessitated first attention to the immediate service demanded. It is my feeling that the progress in the completion of transcontinental roads is gratifying, but I do not lose sight of the fact that the lack of trans-State routes in the agricultural States of the Mississippi Valley is not in keeping with the development, east and west. In specific States this condition is brought about more largely by the feature referred to above, that is, the dependence upon county financing, than upon any lack of need of such roads or lack of response on the part of the State highway departments. Now that there has been plainly pointed out and defined the through routes which are of major national importance, there should be an energetic effort made to improve the missing links, not because they are transcontinental routes but rather because in general these unimproved sections lie on the most important State routes, and the failure to improve these imposes a handicap upon the people of each State in the satisfactory use of their own road systems. But the national use must not be lost sight of nor the requirement of the national legislation that these interstate routes shall be expedited. The Department has not attempted to dictate the routes which should be regarded as major State routes. Neither for that matter have the State highway departments. Through the careful work of the Joint Board on Interstate Highways, and the Executive Committee of the Association, each State highway department has expressed in a definite way the routes which are of the greatest importance within the State. In other words, this system of interstate routes has been built from the local viewpoint upward and not from the transcontinental viewpoint downward.

But having now settled upon these routes, which

in the last analysis the public itself has defined by their use, it becomes our duty, the Federal and State highway departments working in co-operation, to expedite their completion. There are approximately 80,000 miles of highway included in these routes. To complete them to a state of improvement satisfactory for present use is a matter of closing gaps. I am convinced that this, the initial improvement, can be completed by 1930 without difficulty, and as a definite objective I can think of no expenditure of effort which would bring with it a greater return of public satisfaction or any more intelligent method of keeping faith with both the Federal and State Governments which have entrusted to us the administration of these large funds.

The uniform signing and numbering of the U. S. highway routes in accordance with the reasonable plans now devised are essential in order to establish it in the public mind as an entity. They are needed also to develop the maximum degree of service and safety in their use by the ever increasing public traffic. From the Federal point of view the early improvement of these routes is of large importance, and I ask your full support in an effort, when these designated routes shall have been ratified by this Association, to complete the unimproved links at the earliest possible time and to bear with this Department in a reasonable but insistent demand that the Federal funds so far as possible be dedicated to this purpose with the full consent and belief on the part of the highway departments that the end is desirable and worthy. I esteem it a privilege and it has been a pleasure to meet with this association, to know in more detail of its work, and to have the opportunity to express to you my high appreciation of the character of men who are engaged in this public service, and my sincere thanks for the unflinching co-operation of the highway departments.



Scene at Sebring, Highlands County, Lake Jackson.

Florida State Road Department Budget of Maintenance and Construction Work for 1927

PROJECTS UNDER CONSTRUCTION

Road No.	Project No.	COUNTY	FROM	TO	Length
1	621	Okaloosa	Milligan—Walton County Line		17.34
1	14	Santa Rosa	Milton—Station 338 East		6.00
1	514	Jackson	Apalicola River—11 Mi. West		11.04
1	529	Suwannee	Live Oak—Suwannee River		12.70
1	533	Suwannee	Live Oak—Columbia Co. Line		13.47
1	565	Madison	Suwannee River—Madison		15.99
1	571	Madison	Madison—Greenville		14.26
1	590	Santa Rosa	Proj. No. 14—Okaloosa Co. Line		9.00
1	634	Jackson	Marianna—11 Miles East		11.15
1	673	Gadsden	Ocklocknee River—Littmans		9.90
1	674	Duval	Jacksonville—Enterprise		3.50
1	54	Leon	Tallahassee—Jefferson Co. Line		19.23
1	58	Jefferson	Leon County Line—Monticello		6.31
1	59	Jefferson	Monticello—Aucilla River		9.10
1	52	Escambia	Pensacola—Escambia Bay		10.08
1	697	Escambia	Perdido River Bridge		488 ft.
1	621	Okaloosa	Bridges		2,960 ft.
1	634	Jackson	Chipola River Bridge		476 ft.
1	672	Leon	Ocklocknee River Bridge		1,950 ft.
1	1	Okaloosa	Milligan—Holt		10.40
1	536	Gadsden	Littmans—Quincy		5.36
2	7	Hamilton	Georgia State Line—Jasper		12.90
2	37-B	Alachua	Under-pass		.191
2	37-D	Alachua	Paynes Prairie		2.14
2	53-A	Lake	Leesburg—Dead River		7.10
2	53-C	Lake	Dead River—Tavares		1.87
2	687-A	Lake	Helena Run—Groveland		15.00
2	648	Hardee	Zolfo—Brownsville		14.19
3	421	Nassau	St. Mary's River Bridge		560 ft.
3	46	Nassau	St. Mary's Riv.—2 mi. S. Yulee		11.51
3	659	Clay	Duval Co. Li—Green Cove Spgs.		13.27
3	660	Clay	Green Cove Spgs.—Putnam Co. Li		10.52
3	721	Putnam	Palatka—Rice Creek		4.00
3	543	Seminole	Sanford—Maitland		14.20
4		Nassau	St. Mary's River Bridge		600 ft.
4	47	St. Johns	Duval Co. Line—St. Augustine		14.96
4	48	St. Johns	St. Augustine—Pellicer's Creek		15.39
4	49	Flagler	Pellicer's Creek—Bunnell		13.81
4	668	Brevard	Sharpes—Bonaventure		13.45
4	608	Brevard	City of Eau Gallie		2.00
4	691	Indian River	Vero—St. Lucie County Line		5.52
4	692	St. Lucie	Indian River Co. Li—Ft. Pierce		7.38
4	693	St. Lucie	Ft. Pierce—Martin County Line		8.73
4	694	Martin	St. Lucie County Line—Stuart		8.48
4	640	Martin	Stuart—Jupiter		20.80
4	656	Palm Beach	Jupiter River Bridge		799 ft.
4	641	Palm Beach	Jupiter—West Palm Beach		13.36
4	653	Broward	Palm Beach Co. Li—Ft. Lauderdale		13.46
4	41	Dade	Broward County Line—Miami		11.36
5	619	Alachua	Half Moon—Levy Co. Line		9.28
5	682	Citrus	Dunnellon—Holder		6.45
5	663	Citrus	Floral City—Hernando Co. Line		8.03
5	679	Hernando	Citrus Co. Line—Brooksville		7.11
5	593	Manatee	Manatee River Bridge		3,600 ft.
5	614	Sarasota	Sarasota—Venice		19.07
5	564-B	Charlotte	Acline—Lee County Line		10.31
5	564-C	Charlotte	Punta Gorda—Acline		3.93
5	589	Lee	Charlotte Co. Li—Caloosahatchee Ri		8.27
5-A	718	Columbia	Santa Fe River—Ft. White		8.22
5-A	587	Columbia	Ft. White—Itchucknee River		4.37
8	605	Polk	Haynes City—Frostproof		21.00
10	645	Wakulla	Lost Creek—Ocklocknee River		17.00
10	646	Franklin	Ocklocknee River—Carrabelle		18.00
10	592	Franklin	Apalachicola—Gulf Co. Line		10.21
10	651	Gulf	Franklin Co. Line—Port St. Joe		14.72
13	677	Levy	Alachua Co. Line—Otter Creek		18.54
14	50	Putnam	Alachua County Line—Palatka		26.00
17	675	Polk	Lakeland—Hillsborough Co. Li		5.16
18	655	Highlands	Lake Annie—DeSoto Co. Line		15.00
18	667	DeSoto	Highlands Co. Line—Arcadia		9.00
19	698	Leon	Tallahassee—Jefferson Co. Line		12.45
19	699	Jefferson	Leon County Line—Capps		7.70
19	580	Dixie	Steinhatchee River—Cross City		17.10
19	676	Levy	Suwannee River—Marion Co. Li		34.18
20	500-A	Bay	Panama City—Bayou George		9.65
20	671	Jackson	Cottondale—Godwin's Gin		4.50
24	534	Brevard	Osceola Co. Line—Melbourne		14.00
27	669	Dade	Coral Gables—East		22.00
35	623	Madison	Greenville—Taylor County Line		33.00
Total					Miles 846.80 Feet 11,433.00

Note—Projects listed above on Roads 5-A, 10, 13, 19, and 20 (south of Marianna) are being constructed with funds supplied by the counties in which such work is under construction.

PROJECTS GRADED TO BE PAVED.

Road No.	Project No.	COUNTY	FROM	TO	Length
1	6	Madison	Greenville—Aucilla River		5.60
1	9	Holmes	Ponce de Leon—Argyle		5.11
1	515	Jackson	Bay County Line—Cottondale		16.60
1	557	Gadsden	East Approach to Victory Bridge		.67
1	567	Walton	Okaloosa Co. Li—DeFuniak Spgs.		21.35
1	579	Holmes	Westville—Ponce de Leon		8.62
1	586	Jackson	Marianna—Chipley		17.37
1	631	Washington	Bonifay—Chipley		8.53
1	633	Gadsden	Chattahoochee—Station 520		9.67
1	634	Jackson	Marianna—11 Miles East		11.15
1	639	Gadsden	Station 520—Quincy		9.83
1	658	Holmes	Caryville—Bonifay		8.21
1	672	Leon	Tallahassee—Ocklocknee River		9.92
2	599	DeSoto	Carlstrom Field—Charlotte Co. Li		7.40
2	503	Charlotte	DeSoto Co. Line—Lee Co. Line		20.18
6	666	Jackson	Marianna—Godwin's Gin		6.52
6	670	Jackson	Godwin's Gin—Alabama State Li		12.30
10	56	Leon	Georgia State Line—Tallahassee		17.98
10	644-A	Wakulla	Wakulla River—Lost Creek		7.35
Total					204.36

MAINTENANCE.

Maintenance of Roads Included in Above Construction Budget and Roads Heretofore Constructed.

Division No.	Length
1	586.08
2	331.62
3	229.44
4	516.90
5	242.47
6	31.59
7	166.00
Total	Miles 2,104.10

PROJECTS NOT UNDER CONSTRUCTION.

Road No.	Project No.	COUNTY	FROM	TO	Length
2	53-B	Lake	Dead River & Dora Canal Bridges		620 ft.
2	695	Lake	Silver Lake Forks—Eustis		10.50
2	53-D	Lake	Tavares—Mount Dora		6.50
2	695	Lake	Eustis—Mount Dora		6.00
2	661-B	Lake	Helena Run Bridge		190 ft.
2	687	Lake	Groveland—Polk County Line		15.22
2	573-D	Orange	Plymouth—Orlando		17.92
2	573-E	Orange	Orlando—Osceola County Line		13.00
2	610	Osceola	Orange Co. Line—Polk Co. Line		15.00
2		Polk	Lake County Line—Lakeland		24.00
2		Polk	Osceola Co. Line—Hardee Co. Li		54.00
2		Hardee	Polk County Line—Zolfo		12.00
2		DeSoto	Brownsville—Arcadia		6.00
3	57	Nassau	Project No. 46—Duval Co. Paving		3.50
3	664	Clay	Doctor's Lake Bridge		1,600 ft.
3	665	Clay	Black Creek Bridge		1,400 ft.
3		Putnam	Rice Creek Bridge		450 ft.
3		Putnam	Dunn's Creek Bridge		350 ft.
3	705	Volusia	St. Johns River Bridge		1,500 ft.
3		Seminole	St. Johns River—Sanford		3.50
3	704	Orange	Maitland—Orlando		3.88
4	759	Flagler	Volusia County Line—Karon		3.00
4	754	Volusia	Flagler County Line—Holly Hill		12.00
4	753	Volusia	Holly Hill—Rose Bay		8.00
4	40-B	Brevard	Turkey Creek Bridge		108 ft.
4	683	Palm Beach	West P. Beach—Broward Co. Line		25.00
4	654	Broward	Ft. Lauderdale—Dade Co. Line		12.33
5		Citrus	Withlacoochee Bridge		400 ft.
5		Hillsborough	Passo County Line—Tampa		11.00
5	581	Hillsborough	Alafia River Bridge		450 ft.
5	615	Sarasota	Venice—Myakka River		15.00
5		Sarasota	Myakka River Bridge		300 ft.
5		Charlotte	Peace River Bridge		5,000 ft.
5		Hillsborough	Tampa—Six Mile Creek		6.00
5		Lee	Caloosahatchee River Bridge		5,200 ft.
5-A		Columbia	Itchucknee River Bridge		100 ft.
5-A	719	Suwannee	Itchucknee Riv.—Suwannee Riv.		10.00
5-A	518	Lafayette	Branford—Mayo		15.00
5-A	535	Lafayette	Mayo—Taylor County Line		8.00
5-A		Columbia	Santa Fe River Bridge		300 ft.
6	657	Taylor	Lafayette County Line—Perry		12.00
6	502	Jackson	Calhoun County Line—Road No. 1		10.00
6	562-C	Gulf	Port St. Joe—North		6.94
8	562-D	Highlands	Avon Park—Sebring		7.50
8	696	Highlands	Sebring—Township 35-36		10.00
8	562	Highlands	Lake Annie—Station 422		8.00
8	696	St. Lucie	End of Project 636—Ft. Pierce		5.50
10	728	Leon	Tallahassee—Wakulla Co. Line		11.66
10	644-B	Wakulla	Leon Co. Line—Wakulla River		4.65
10	685	Franklin	Carrabelle—East Point		17.43
10	740	Gulf	Port St. Joe—Bay County Line		8.00
10	743	Bay	Gulf Co. Line—East Bay Bridge		22.00
10	680	Bay	East Bay Bridge		4,000 ft.
10	678	Bay	East Bay—West Bay		8.00
10	681	Bay	West Bay Bridge		6,700 ft.
13	742	Nassau	Yulee—Baldwin		35.00
13	677	Alachua	Gainesville Dist. Li—Levy Co. Li		7.65
13	55	Levy	Otter Creek—Cedar Keys		17.74
14		Alachua	Gainesville—Putnam Co. Line		16.17
14		Putnam	Palatka—St. Johns Co. Line		6.00
14		Putnam	Putnam Co. Line—Road No. 4		16.00
16		Marion	Ocala—Road No. 5		16.00
17	732	Polk	Haines City—Lakeland		18.00
17	710	Hillsborough	Polk Co. Line—Pinellas Co. Line		38.00
17	700	Jefferson	Capps—Madison County Line		8.00
19	744	Madison	Jefferson Co. Li—Taylor Co. Li		6.00
19	745	Taylor	Madison County Line—Perry		15.00
19		Taylor	Perry—Salem		10.00
19		Dixie	Cross City—Suwannee River		18.00
19	756	Marion	Levy County Line—Ocala		18.00
20	500-B	Bay	Bayou George—Jackson Co. Line		22.00
21		Volusia	Daytona—DeLand		21.00
22		Brevard	Indian River City—Orange Co. Li		8.00
22	669-D	Osceola	Kissimmee—Brevard Co. Line		37.00
27	669	Dade	Project 669-C—Monroe Co. Line		12.30
27	669	Dade	Section 21-22—Collier Co. Line		3.50
27	669	Collier	Marco Junction—Lee Co. Line		12.00
27	713	Collier	Watertown—Union County Line		20.00
27	714	Columbia	Columbia Co. Line—Lake Butler		10.00
27	715	Union	Lake Butler—Bradford Co. Line		4.00
27	716	Bradford	Union County Line—Starke		11.00
27	717	Bradford	Starke—Keystone Heights		10.00
27	706	Putnam	Palatka—Keystone Heights		20.10
27		Putnam	Palatka—Flagler County Line		11.00
27		Flagler	Putnam County Line—Bunne		15.00
27		Suwannee	Through Suwannee County		35.00
27	624	Hamilton	Suwannee County Line—Jasper		6.50
27	548	Levy	Alachua Co. Li—Marion Co. Li		18.00
Total					Miles 980.99 Feet 28,668

Estimated Resources of State Road Department For Year 1927

Balance on hand January 1, 1927.....	\$ 2,274,806.50
State Road Tax Fund.....	\$ 500,000.00
Gasoline Tax Fund	8,000,000.00
Gasoline Inspection Fund..	200,000.00
Auto License Fund	4,500,000.00
Auto Title Registration Fund	200,000.00
Federal Aid Fund	1,000,000.00
Due from Counties for Work Done	2,000,000.00 16,400,000.00
<hr/>	
Total estimated resources for year 1927...	\$18,674,806.50
10 per cent reserve for emergency work...	1,867,480.65
Net estimated resources available for road construction and maintenance.....	16,807,325.85



Project 669-V, Collier County, Road 27. Indian Camp on Tamiami Trail in the Everglades.



Road 5, Lee County—Florida Lime-Rock Base.

Legislation for Pedestrians

(From the Literary Digest)

One problem created by the automobile's growing toll of life "concerns the ability of motorists causing these accidents to render adequate financial recompense to the victims or their families," for "many of the half million persons injured last year were forced to meet hospital, surgical and medical bills toward which expenses the person who injured them contributed nothing." And this situation prompts Clark Belden to present in the *Elks Magazine*, under the title "A New Responsibility for Motorists," a review of several factors which have combined, he says, to emphasize "the growing importance of the motorist's financial responsibility—or lack of it." In the first place:

Automobile accidents recently took their place as the leading cause of accidental fatalities. With 20,000,000 automobiles and several times that number of pedestrians forced to use one common spot—our streets and highways—at the same time for many hours each day, this is hardly surprising. Few persons will be startled at the statement of Hon. Robert S. Marx, Judge of the Superior Court of Cincinnati, that today "three-fourths of all civil jury trials are concerned with personal injury claims largely arising from automobile accidents."

The property-owning motorist usually carries automobile liability and property damage insurance to protect himself from the results of personal injury suits. The more property he has the more insurance he usually carries. The self-preservation instinct—the common sense of holding on to what you have—urges this course. The size and frequency of the automobile liability damage verdicts awarded by

juries in recent years has encouraged this tendency. Verdicts of \$10,000 or \$15,000 and higher are awarded so frequently today that often they no longer "make" the front page of the newspapers. Nor is it necessary to kill a person for a jury to award such a verdict. Broken arms, legs or ribs alone are often valued as high as that by juries.

The less property a motorist owns the less he is inclined to carry insurance—unless he be the type of individual who visualizes clearly and takes seriously his responsibility to his potential victim. Many persons lacking property, however, do not project their thinking beyond themselves. Some assetless motorists do not fear a \$15,000 injury suit in the slightest. Legally, they have little cause to fear one. Their attitude would be apt to be, in the language of the street: "Try and get it!"

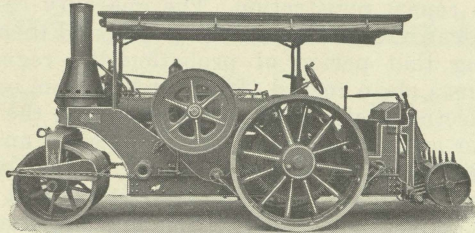
Such a situation, says Mr. Belden, suggests the desirability of legislation to protect potential victims of automobile accidents—pedestrians. Of attempts to bring about such legislation, he gives us facts from which it is plain that the problem is exercising many minds. Thus:

During 1924 and 1925, the Legislatures of thirty-eight States considered bills aimed to assure every victim of an automobile accident, or his family, financial remuneration regardless of the financial status of the automobile owner at fault. These bills have called for compulsory insurance.

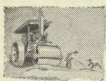
A contention of compulsory insurance advocates is that the cost of insurance to any one motorist under this plan would not attain a burdensome figure because it would be spread among all the motorists of a given State in equal proportion.

BUFFALO-SPRINGFIELD ROLLERS

The choice of experienced
engineers and contractors



Furnished in all weights and types—
motor and steam propelled.
Inquiries Invited.



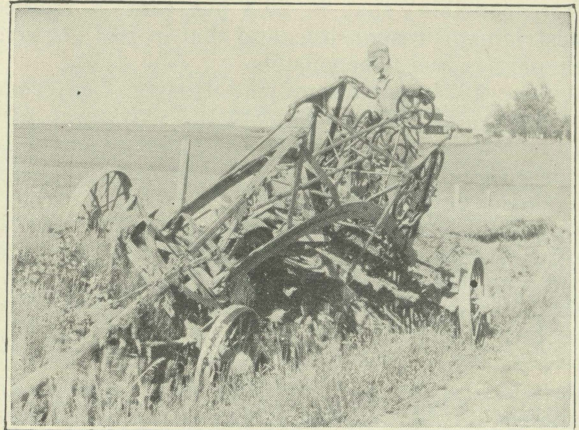
The Buffalo Springfield Roller Co.
Springfield, Ohio.



FLORIDA AGENTS

E. F. HOLMES
37 N. W. Third Ave.,
Miami

M. D. MOODY
402 Masonic Temple,
Jacksonville



AUSTIN LEANING WHEEL GRADERS With Telescopic Axles

The advantages of telescopic rear axles on Leaning Wheel Graders are becoming more recognized every day. Operators of machines equipped with this adjustment are using it constantly in order to accomplish more and better work.

For example—on work such as that illustrated above, the operator places his rear wheels just where he wants them. The upper wheel can either run along the edge of the bank or follow in the path of the blade wherever the going is smoothest.

The new Austin Leaning Wheel Grader Catalog describes these machines in detail.

Write for your copy today.

The Austin-Western Road Machinery Co.

400 N. Michigan Ave. Chicago.
Atlanta Branch Office and Warehouse: 345 Whitehall St.

Many persons believe that compulsory insurance will reduce accidents.

It is fair to spread the cost of compulsory insurance among all motorists, according to its advocates, because it is impossible to forecast which particular motorist will have an accident and which will not.

Those who oppose the compulsory insurance idea state that it is unjust in principle, because it compels motorists who are careful and who do not have accidents to pay for the damage done by reckless motorists.

It is also maintained that compulsory insurance disregards the fact brought out by the Hoover Conference on Street and Highway Safety that only 5 per cent of the insured drivers have accidents during one year, or that the average driver has but one accident in twenty years. And that it is possible to discover the identity of this small and reckless minority.

The plan of the compulsory payment of annual insurance premiums by motorists has also been questioned in the light of its possible unconstitutionality. Some opponents maintain that it is contrary to the spirit of the Constitution to tax certain citizens who are free of blame for the payment of damages for which other citizens are directly and solely responsible.

Another contention is that compulsory insurance would increase rather than decrease accidents because it would give persons lacking a sense of responsibility an undue sense of security, so that they would be apt to "lean" on the protection it afforded and "run wild."

The opponents of compulsory insurance, we are further reminded, call attention to the fact that

OUR SERVICE ON

Contract Bonds

and all other classes of Surety Bonds is unsurpassed.

American Surety Company of New York

Atlanta, Ga., Branch Office, 1320 Hurt Building.
H. N. HUTCHINSON, Manager.

pedestrians are to blame for many accidents and that the whole responsibility can not fairly be placed upon the shoulders of motorists. They set forth the following data:

A two-year survey of automobile accidents in the District of Columbia from July 1, 1923, to August 31, 1925, indicated that in 21.6 per cent of the cases the pedestrian was to blame. In Connecticut during 1923, 43 per cent of the fatal accidents and 50 per cent of the serious personal injury accidents were the fault of persons other than the operators of the cars. The National Bureau of Casualty and Surety Underwriters summarized the cause of 21,120 accidents for the Hoover Conference and reported that 28.3 per cent were the fault of the pedestrians. The Insurance Committee of the Hoover Conference found that in

32.7 per cent of motor accidents a reckless driver was responsible; that in 29.3 per cent, a reckless pedestrian was responsible, and that in 18.7 per cent, both parties were responsible.

At the 1924 meeting of the Hoover Conference on State and Highway Safety, the matter of compulsory automobile insurance was referred to the Insurance Committee for consideration as a means of reducing accidents. The committee rejected this proposal. The question was then brought up during the general meeting of the Conference. It was voted down almost unanimously.

Opponents of compulsory insurance also state that it will furnish victims no indemnity in cases where there are no witnesses, and in cases where the pedestrian is struck by a driver who makes an immediate getaway, and that under compulsory insurance injured pedestrians will have to prosecute their claims as at present under the laws of negligence. The pedestrian would receive nothing if the motorist were not proven at fault.

In 1924, American people paid \$103,000,000 in premiums for automobile liability insurance. The enactment of compulsory automobile insurance would increase the annual premiums to over \$400,000,000.

Connecticut is the first and as yet the only State to place in operation a law designed to safeguard the financial interests of the victims of automobile accidents—and, incidentally, to reduce the number of automobile accidents by putting dangerous motorists off the road. On January first of last year, Connecticut's new "financial responsibility" act went into effect. Connecticut's experiment was designed by Motor Vehicle Commissioner Stoeckel to avoid the various pitfalls raised by the compulsory insurance proposals in other States.

The Connecticut law is based on the fact that a small minority of motorists causes the great majority of accidents. It protects the public from this small and dangerous minority.

Holders of motor-vehicle registration certificates who are convicted of reckless driving, including speeding, operating while drunk, or evading responsibility, or who cause the death of, or injury to, any person, or cause damage to property of at least \$100 will be required to produce evidence satisfactory to the Motor Vehicle Commissioner of ability to pay for damage up to \$11,000. Penalty for failure to furnish satisfactory evidence of financial responsibility will be loss of registration.

The law provides four different methods by which automobile owners may qualify as to financial responsibility.

The first method is by insurance. Blanks have been furnished to all insurance companies doing business in Connecticut upon which they certify to the department that an insurance policy covering the liability specified under the new law has been issued to the applicant for registration. The financial responsibility required is that it must be sufficient to satisfy any claim for damages by reason of personal injury to, or death of, any person, to at least \$10,000, and for property damage to the extent of \$1,000.

The second method is by filing a bond.

The third method is by depositing cash with the State Treasurer. He will issue a receipt for the deposit and may pay interest on it at a rate of not more than 5 per cent.

The fourth method is by depositing collateral with the State Treasurer. The Commissioner of Motor Vehicles is the determining authority of the State as to the amount and kind of collateral that will be accepted.

Applicants for registration started with clean slates when the law went into effect. Since that date, accidents and convictions have called forth evidence of financial responsibility. This guaranty against damage claims must be continued as long as the Motor Vehicle Commissioner sees fit, under penalty of refusal to renew registration. The guaranty can not be withdrawn in less than three years, and then only if during that period of probation the registrant maintains a clean record. If a motorist from outside of Connecticut refuses to post a guaranty, the Commissioner may refuse him a right to operate an automobile in Connecticut.

Motor-vehicle accidents and convictions will bring before Commissioner Stoeckel for financial qualification each year about 15 per cent of Connecticut automobile owners. Out of these, about one-half will be cases where no department decree follows. The other half, or from 15,000 to 17,500 persons, will be required to guarantee their financial responsibility.

There is no way of telling ahead as to who will be required to post a guaranty. No person will have to do so, except by his own act.

The satisfactory operation of the new act is made possible because Connecticut requires licenses of all operators and reporting to the Motor Vehicle Department of all automobile accidents. Connecticut also has an efficient State Police to help enforce it. Furthermore, the Motor Vehicle Department has for consultation the records of 80,000 operators which describe accidents and convictions during the last eight years.

The Connecticut law is aimed directly at the type of registrant who has had several accidents, and who is apt to have several more, but whose record has not been bad enough to cause the Commissioner to revoke his driving license. The one extreme—the man who has a clear record—need hardly be feared. The other extreme—the man with an extremely dangerous record—has already been put off the road.

Some people may feel that it is unjust discrimination to prohibit any person from owning and operating an automobile. Certain people are deprived of their liberty and placed in jails and prisons, and asylums because their acts have made them a menace to their fellows. No State is under an obligation to allow unfit persons to own and run automobiles any more than it is obliged to allow murderers, thieves, criminals in general and insane people to roam at large.

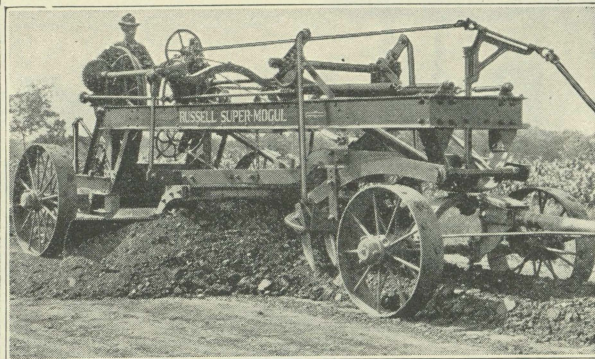
Connecticut's pioneer effort to solve the hazard of financial irresponsibility promises several interesting results.

Foremost will be that of providing the public with financial guarantees against the most dangerous type of motorist—the person whose record shows one or more serious violations of the motor-vehicle law. One aspect of this result will be to increase greatly the percentage of Connecticut motorists who are financially responsible.

Another effect of the law will be to gradually eliminate from the Connecticut highways those persons who seem bound to have accident—"repeaters"—thus tending to reduce the number of automobile accidents in the State.

Carey Elastite Expansion Joint can be installed easily in any kind of weather, by unskilled labor and without special tools. Inexpensive, too--and as convenient to handle as a board.

The Philip Carey Company
Lockland, Cincinnati, Ohio



Russell Super-Mogul

The strongest grader of them all—a powerful combination machine—grader and scarifier in one unit—operated together or independently as work requires. Weighs complete 10,200 pounds—the blade is 12 feet long and 24 inches wide. In addition we make a back sloper—a device for building flat bottom ditches—quickly attached. Russell Machines are models of efficient, simple and economical operation. They have extra strength built into all the parts we know are most likely to be put to unusual or extreme demands.

The complete Russell Line for road construction, road maintenance and road repairing includes—

10 Sizes Road Machines—2 Sizes Elevating Graders—Maintenance Patrol Machines for both Motor and Horse Power, Scarifiers, Road Drags and Wheel Scrapers, Drag Lines, Gravel Screening, Crushing and Loading Equipment, Steel Beam Bridges, etc.

Catalog of special interest to all road builders—sent free and postpaid.

RUSSELL GRADER MFG. CO.
Minneapolis, Minn.

JULIEN P. BENJAMIN
Jacksonville, Fla.



The registrant will be held accountable for damage done by his car—even though he personally be far from the scene of the accident.

The Connecticut financial responsibility act, in confining its application to those who violate the motor-vehicle laws rather than applying to the careful and the reckless alike, avoids the basic objections of compulsory insurance. It is possible that this solution of the financial responsibility problem will commend itself to other States. If it does, its adoption by certain States would necessitate a sweeping change in their automobile laws. Certain States at present do not compel operators to secure licenses; they do not require a reporting of automobile accidents; they have no system of keeping the driving records of motorists; nor do they have a State Police to work with the Motor Vehicle Department in the enforcement of automobile laws—all of which Connecticut has. Those States which follow Connecticut's lead will find it necessary to amend their motor-vehicle laws in these respects.

Interesting innovations in methods of selling automobile insurance may also come about. The insurance companies are consulting the 80,000 records of the Motor Vehicle Department to determine the desirability of applicants for automobile insurance. In the near future, it is possible that before a Connecticut motorist can secure liability or property damage insurance, his official motoring record will be scrutinized by the companies. This plan would mark a departure in the present methods of accepting automobile liability insurance business.

Another innovation may also be in the offing. Having examined an applicant's driving record be-

fore issuing a policy, it would be a logical step to adopt the principle of grading the premiums, thus making the person with bad driving record—"the accident breeder"—pay a larger premium than the person with a clean record. This would make the cost of the insurance proportionate to the hazard involved. Such a system is already in use in selling life, health, fire, compensation, and other kinds of insurance. It is possible that the new law will result in the insurance companies grading their automobile liability premiums.

Cheap at Half the Price

An artist was employed to renovate and retouch some oil paintings in an old church, and when he sent in his bill of \$31.99 was informed that an itemized bill was required. Whereupon the following was duly presented:

For correcting the Ten Commandments . . .	\$ 5.12
For renewing heaven and adjusting the stars . .	7.12
For touching up purgatory and restoring the lost souls	3.06
For brightening up the flames of hell, putting a new tail on the devil and doing odd jobs for the damned	7.17
For putting a new stone in David's sling and arranging Goliath's head	6.13
For mending shirt of Prodigal son	3.39

Total \$31.99

—Maine Motorist.



THE GALION LINE INCLUDES

Motor and Steam Macadam Rollers

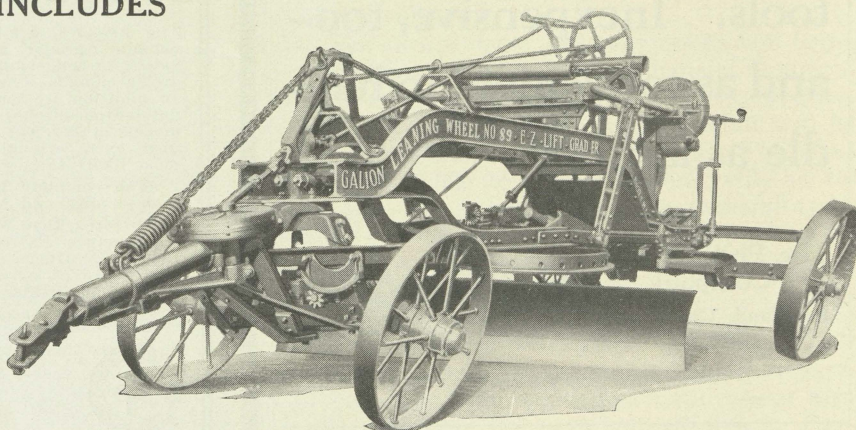
Motor and Steam Tandem Rollers

Rollers in 5 to 8-Ton Sizes with Scarifier and Planer

Straight and Leaning Wheel Graders

Motor Graders to Meet All Needs

Fresnos, Stone Spreaders, Belt Conveyors, Etc.



GALION

Can Supply All Your Needs
with the Latest and Best in

ROLLERS and GRADERS

The Complete, Modern Line. Write for prices and literature. We have big stocks and can serve you promptly. The Galion Iron Works and Manufacturing Company of Florida, 100 West Amelia Avenue, Orlando, Florida.

Contracts Awarded by State Road Department January 1st, 1927, to February 17th, 1927

Contractor	Project No.	County	Length Miles	Length Feet	Contract Plus 10%	Type
Noonan-Lawrence	54	Leon	13.00	....	\$ 385,297.67	Concrete
Higginson Const. Co.	59	Leon-Jefferson	9.10	....	266,053.37	Concrete
Duval Engr. & Contr. Co.	54-A & 59	Leon-Jefferson	12.53	....	264,524.48	R. B. S. T.
Manley Constr. Co.	53-A	Lake	7.10	....	249,034.28	Asph. Conc.
W. J. Bryson Paving Co.	52	Escambia	10.089	....	241,904.49	C. G. & G.
Boone & Wester	677-C	Levy	10.16	....	224,345.88	C. G. & G.
Thompson & Moseley, Inc.	677-D	Levy	7.58	....	66,017.34	C. G. & G.
Lake Worth Const. Co.	683-C	Palm Beach	8.27	....	44,290.95	C. G. & G.
B. Booth & Co.	687-B	Lake	15.22	....	89,496.93	C. G. & G.
C. T. Dawkins	50-A	Putnam	....	120	22,243.32	Conc. Overhead
Okeechobee Const. Co.	655-667	Highlands	....	815	50,006.45	Timber
C. H. Turner Co.	697	Escambia	....	488	22,911.53	Timber
Duval Engr. & Contr. Co.	571	Madison	14.26	....	47,190.03	S. T.
Langston Const. Co.	660	Clay	10.52	....	33,538.07	S. T.
H. E. Wolfe	48	St. Johns	15.39	....	371,253.82	R. B.
Nelson Brothers	694	Martin	8.48	....	275,185.30	Concrete
Johnson, Drake & Piper	693	St. Lucie	8.93	....	312,662.92	Concrete
Concrete Steel Bridge Co.	665	Clay	....	1400	208,167.96	Concrete
Concrete Steel Bridge Co.	664	Clay	....	1600	236,366.90	Concrete
Royce Kershaw, Inc.	640-B	Martin	....	131	32,201.40	Concrete
F. M. Stuart & Co.	40-B	Brevard	....	108	40,149.91	Concrete
Langston Const. Co.	641	Palm Beach	9.67	....	188,279.21	R. B.
Samuel Vadner	695	Lake	10.50	....	63,734.69	C. G. & G.
Tampa Sand & Shell Co.	695	Lake	....	....	63,368.28	Hyd. Fill
R. C. Huffman Const. Co.	669-D	Dade	12.30	....	382,038.36	C. G. & G.
Deen, Yarborough & Ebersbach	685	Franklin	17.43	....	159,980.86	C. G. & G.
Wm. P. McDonald Const. Co.	648	Hardee	7.14	....	24,075.97	S. T.
L. M. Gray	676-A-B	Levy	24.35	....	80,637.57	S. T.
Totals			232.01	4662	\$4,444,957.94	

Jack Camp, E. F. Fitch, Clarence Camp,
President. Vice-President. Sec. and Treas.

CAMP CONCRETE ROCK COMPANY

Jacksonville Ocala Tampa

Producers of High Grade Washed, Crushed
and Sized

CONCRETE ROCK

"Camp Quality"

Capacity 1,500 to 2,000 tons daily. Quarry,
Camp, Florida, Hernando County, on the At-
lantic Coast Line Railroad. Our product has
been approved for all structural concrete
and bituminous macadam.

C. W. STONE, Sales Manager

Sales Offices: 1011 Bisbee Bldg., Jacksonville, Fla.
Room 212, Allied Bldg., 112 Cass St., Tampa, Fla.

Contractors' Bid and Performance Bonds

**And Insurance Requirements
Expeditiously Handled**

Agents throughout Florida.

Harry F. Fromme & Co.

General Agents

Jacksonville
Graham
Bldg.

Tampa
Citizens
Bank Bldg.

Miami
Myers-Kiser
Bank Bldg.

Florida

Consolidated Rock Products Company

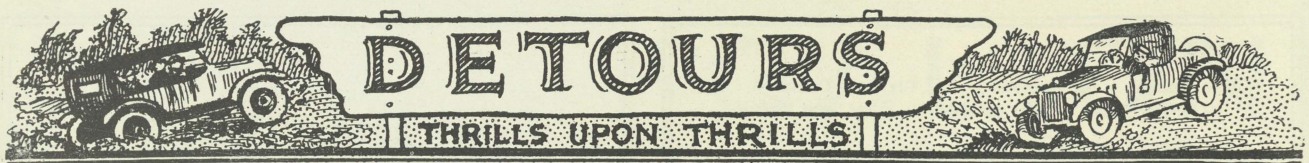
**PRODUCERS OF CONCRETE ROCK AND
LIMEROCK FOR ROADS**

QUARRIES

Hard Rock, Brooksville, Fla.
Limerock, Edgewater, Fla.

GENERAL OFFICES

Rooms 907-917
Marble Arcade Bldg.
Lakeland, Fla.



The Young Idea

Bona fide gems from examination papers:

"The Saxons were a lazy and glutinous race."

"Wordsworth saw in the French Revolution a new error of happiness."

"The Magna Carta occurred in the reign of King John. The barons compelled him to sing it."

"Lack of indiscretion was Stephen's greatest personal enemy."

"Altho Henry was not outwardly offended with Cromwell, after he had made him a baronet he sent him to the block for being a nuisance."

"Wolsey was a great, daring and bold warrior. Some of his chief victories were the capture of Quebec, the battle of Waterloo and the battle of Trafalgar Square." (Student appears to have made the Cardinal a composite of Wolfe and Wellesley, with a dash of Nelson.)

After telling of the clash between Henry VIII and the Pope, one student concluded: "England was freed from the ecclesiastical jokes of the Pope"—the most amusing of which appear to have been his bulls.—Boston Transcript.

A Tall Match

Heshe: "Did you hear about the wooden wedding?"

Shehe: "I'll bite."

Heshe: "Two Poles were married."—Blue Jay.

Roadside Tinker

Brown: "I hear Jones is letting the rest of the world go by."

Greene: "Retired, eh?"

Brown: "No, bought a used car."—Allston Recorder.

Call Again

Too much of the talking that money says to most of us is, "Good-by."—Arkansas Gazette.

Thrift vs. Education

"Fadder, you told me you would give me a dollar every time I got an A in collitch. Fadder, I made two last week."

"Vell, here's two dollars. Now quit studying so much. It's bad for you."—Oklahoma Whirlwind.

Just as Good

The grocer had put a new boy to work, and among the other instructions was this:

"If you don't happen to have what a customer wants, suggest something else as nearly like it as possible."

Soon a woman came into the store and asked the boy, "Have you any fresh green stuff today?"

"No, ma'am," answered the boy, "but we have some nice bluing."—Forbes Magazine.

Keep walking to keep well, the doctors advise. To be sure; and, occasionally, jump.—Des Moines News.

Most of us have given up hope of ever finding a diamond in the rough. Most of us would be content to find a new and unmarked golf ball there.—Arkansas Gazette.

Her Hearty Endorsement

Hero: "Darling, will you marry me?"

Her: "No, but I'll always admire you for your choice."—Whirlwind.

An Unshorn Samson

The slugger who was reported to have been seen during his last reign of terror was described as a powerful man with unkempt hair about six feet in height.—Detroit Free Press.

Trying the Shock Cure

"How did you cure your wife of her antique craze?"

"Oh, I just gave her a 1907 model automobile for her birthday."—Widow.

The Fashionable Remedy

"Her countenance fell,"

Writes an author gifted.

No doubt she went

And had it lifted.

—Boston Transcript.

"Bang Went Saxpence."

A Scotsman, invited to a golden wedding, was told that each guest would be expected to take a golden present.

He took a goldfish.—Tid-Bits.

Burning Words

"My husband is very frank and plain-spoken. He always calls a spade a spade."

"So does mine. But I can't tell you what he sometimes calls his golf clubs."—Good Hardware.

"A thousand pardons" was once believed to be an extravagant phrase of politeness, but "Ma" Ferguson has made it look like a piker with more than 3,000.—Arizona Record.

Gallie irony: The building in Paris which houses the Folies Bergere is now owned by a charitable institution and all profits go to the blind.—Detroit News.

News that last year's apple crop was 234,000,000 bushels is printed in Produce Reports when it might just as well be listed among Vocational Hazards of Doctors.—Arkansas Gazette.

The House That Jack Built

"There are exceptions to all rules, you know."

"Indeed. Where's the exception to the rule that we all must die?"

"Ah, that's the exception to the rule that all rules have their exceptions."—Boston Transcript.

C. M. Lyle Construction Company
GENERAL CONTRACTORS
Jackson Building
GAINESVILLE, . GEORGIA
Oct. 27th. 1926

Mr. C.E. Ireland, V.P. & Sales Manager,
Birmingham Slag Co.,
1807 Age-Herald Bldg.,
Birmingham, Ala.

Dear Sir:-

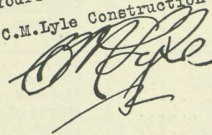
We have just finished F.A.P. No. 320, Penetration Macadam Road in Habersham County, and I take this occasion to thank you for the wonderful service your company rendered us during the construction of this job.

We were never delayed for the want of Slag, and your company co-operated with us to the fullest extent. The prompt shipment of material on a job of this type spells the difference between profit and loss.

From careful inspection during the construction of this road, I have come to the conclusion that Slag is far superior to stone for Penetration Macadam work. We experimented with both on this job, and there is a marked difference between the finished road. We shall not forget you on any job where freight rates will permit you to get in.

Yours very truly,

C.M. Lyle Construction Company




BIRMINGHAM SLAG CO.

Atlanta
Thomasville • BIRMINGHAM • Montgomery
Ocala, Fla.



Status of Construction

THROUGH DECEMBER 31, 1926.

Proj. No.	Contractor	Road No.	County	Total Length Miles	Clearing Miles	Grading Miles	Base Miles	Surface Miles	Type	Per Cent Complete
7	Duval Engr. & Contr. Co.	2	Hamilton	13.00	.....	.....	13.00	6.50	S.T.	90.00
37-D	L. M. Gray	2	Alachua	2.14	.....	.....	1.66	.08	S.T.	80.00
41	Morgan-Hill Paving Co.	4	Dade	12.00	12.00	11.64	11.17	3.52	S.A.	80.00
46	McMahan Const. Co.	3	Nassau	11.51	.....	.....	.....	0.00	Conc.	0.00
47	J. B. McCrary Engr. Corp.	4	St. Johns	14.96	.....	.....	.....	0.00	Conc.	0.00
48	A. J. Hoffman	4	St. Johns	15.94	15.94	15.14	.....	.....	G.	97.00
49	A. J. Hoffman	4	Flagler	13.81	13.53	7.60	.....	.....	G.	70.00
50-A	Boone & Wester	14	Putnam	6.18	0.00	0.00	.....	.....	G.	0.00
50-B	B. Booth & Co.	14	Putnam	9.77	9.77	8.00	.....	.....	G.	75.40
50-C	E. Roy James	14	Putnam	10.03	8.02	4.51	.....	.....	G.	50.40
53-A	B. Booth & Co.	2	Lake	7.11	6.61	6.61	.....	.....	G.	93.50
53-C	Tampa Sand & Shell Co.	2	Lake	1.87	.47	.28	.....	.....	G.	2.00
500-A	Noonan-Lawrence	20	Bay	9.65	9.65	8.00	.....	5.00	Conc.	67.00
504	Duval Engr. & Contr. Co.	1	Columbia	9.41	.....	.....	9.00	7.64	S.T.	98.00
514	State Convict Forces	1	Jackson	11.04	9.27	9.27	.....	4.20	S.C.	64.60
529	M. C. Winterburn, Inc.	1	Suwannee	12.70	.....	.....	.....	1.65	Conc.	16.28
533	Baker & Foulks, Inc.	1	Suwannee	13.47	.....	.....	7.54	0.00	S.T.	51.00
543	Lake Worth Constr. Co.	3	Seminole	14.20	13.49	12.78	.....	.....	G.	78.00
564-B	Broadbent Const. Co.	5	Charlotte	9.73	.....	.....	9.73	0.00	S.T.	92.00
564-C	E. F. Powers Const. Co.	5	Charlotte	3.94	3.94	3.35	.....	.....	G.	92.00
565	Johnson, Drake & Piper	1	Madison	15.99	.....	.....	.....	7.51	Conc.	47.70
571	Duval Engr. & Contr. Co.	1	Madison	14.28	.....	.....	.71	0.00	S.T.	1.25
580	State Convict Forces	19	Dixie	13.00	Under construction		.....	.....	S.T.	*
587	C. G. Kershaw Const. Co.	5-A	Columbia	4.38	.44	.22	.....	.....	G.	.06
589	H. E. Wolfe	5	Lee	8.16	.....	.....	8.16	4.00	S.T.	98.00
590	State Convict Forces	1	Santa Rosa	9.00	Under construction		.....	.....	G.	*
592	Bennett Constr. Co.	10	Franklin	7.89	1.50	.39	.....	.....	G.	6.80
595	L. M. Gray	3	Volusia	6.43	.....	.....	6.43	6.43	S.T.	100.00
614	Walter J. Bryson Pav. Co.	5	Sarasota	17.07	17.07	9.90	.....	.....	G.	64.00
617 & 618	L. M. Gray	5	Alachua	16.07	.....	.....	16.07	16.07	S.T.	100.00
619	J. L. Gladwell	5	Alachua	9.28	7.42	2.50	.....	.....	G.	27.60
621	Penton-Mathis Const. Co.	1	Okaloosa	17.35	17.35	17.00	.....	.....	G.	98.00
623	State Convict Forces	35	Madison	12.91	12.91	12.65	.....	0.00	S.C.	72.30
631	E. P. Toulmin	1	Washington	8.53	8.53	8.53	8.53	.....	G.	100.00
634	State Convict Forces	1	Jackson	11.07	11.07	11.07	.....	11.07	S.C.	100.00
640-A	S. J. Groves & Sons Co.	4	Martin	9.00	0.00	0.00	.....	.....	G.	0.00
640-B	Lake Worth Const. Co.	4	Martin	11.80	0.00	0.00	.....	.....	G.	0.00
641-A	Chas. F. Wilmore	4	Palm Beach	11.36	10.79	10.22	.....	.....	G.	88.00
648	Southern Surety Co.	2	Hardee	14.17	14.17	14.00	.....	.....	G.	95.00
648	Wm. P. McDonald Const. Co.	2	Hardee	7.14	.....	.....	0.00	0.00	S.T.	0.00
651	State Convict Forces	10	Gulf	14.72	13.98	11.04	.....	0.00	S.C.	39.00
653	H. D. Spanger	4	Broward	13.46	2.15	0.00	.....	.....	G.	1.30
655 (Sec. 2)	H. E. Wolfe	18	Highlands	1.74	1.74	1.74	1.74	1.74	S.T.	100.00
657	State Convict Forces	6	Jackson	10.00	10.00	9.50	.....	9.00	S.C.	90.00
659	M. C. Winterburn, Inc.	3	Clay	13.27	11.41	.40	.....	.....	G.	31.00
660	Langston Const. Co.	3	Clay	10.52	.....	.....	2.63	0.00	S.T.	24.00
663	Wm. P. McDonald Const. Co.	5	Citrus	8.03	.....	.....	7.23	0.00	S.T.	88.80
667	H. E. Wolfe	18	DeSoto	8.63	8.19	6.47	1.90	0.00	S.T.	80.00
668	E. F. Powers Const. Co.	4	Brevard	13.45	12.91	5.38	.....	.....	G.	50.00
669-B	M. C. Winterburn, Inc.	27	Dade	10.32	10.32	10.32	10.32	9.00	S.T.	97.00
669-C	R. C. Huffman Const. Co.	27	Dade	12.00	4.50	4.50	1.20	.....	G.	10.00
669-V	Alexander, Ramsey & Kerr	27	Collier	11.91	9.00	6.45	.....	.....	G.	54.90
669-W	State Convict Forces	27	Collier	14.00	Under construction		.....	.....	S.T.	.....
669-X	Alexander, Ramsey & Kerr	27	Collier	9.39	9.39	6.90	.....	.....	G.	73.54
670	State Convict Forces	6	Jackson	12.30	12.30	12.30	.....	12.30	S.C.	100.00
672	State Convict Forces	1	Leon	9.92	9.92	9.92	.....	9.92	S.C.	100.00
673	State Convict Forces	1	Gadsden	9.90	9.90	8.50	.....	7.50	S.C.	75.00
674	Nelson Brothers	1	Duval	3.50	0.00	0.00	.....	0.00	Conc.	0.00
675	Wm. P. McDonald Const. Co.	17	Polk	5.16	5.16	5.16	5.16	4.13	S.A.	93.00
676-A	L. M. Gray	19	Levy	9.96	.....	.....	1.69	0.00	S.T.	15.00
676-B	McLeod Constr. Co.	19	Levy	14.39	12.95	12.95	.....	.....	G.	81.00
676-B	L. M. Gray	19	Levy	14.39	.....	.....	1.43	0.00	S.T.	10.00
676-C	Langston Constr. Co.	19	Levy	13.93	13.93	6.47	.....	.....	G.	44.00
677-A	A. J. Hoffman	13	Levy	6.96	6.96	2.71	.....	.....	G.	37.00
677-B	Coastal Const. Co.	13	Levy	11.58	1.62	.46	.....	.....	G.	5.40
679	Wm. P. McDonald Const. Co.	5	Hernando	7.12	.....	.....	6.41	0.00	S.T.	93.45
682	L. B. McLeod Const. Co.	5	Citrus	6.46	.....	.....	6.33	4.00	S.T.	97.80
687-A	E. W. Ellis	2	Lake	15.00	12.75	12.00	.....	.....	G.	79.00
691	Mason Payne Co., Inc.	4	Indian River	5.52	2.48	.50	.....	.....	G.	14.00
692	Boone & Wester	4	St. Lucie	7.38	1.99	.52	.....	.....	G.	5.90
693	Boone & Wester	4	St. Lucie	8.73	8.73	7.86	.....	.....	G.	59.00
694	C. A. Steed & Sons	4	Martin	8.48	8.48	8.05	.....	.....	G.	95.00
698	Curtis & Gubbins	19	Leon	12.43	0.00	0.00	.....	.....	G.	0.00
699	State Convict Forces	19	Jefferson	7.71	Under construction		.....	.....	G.	.....
718	C. G. Kershaw Const. Co.	5-A	Columbia	8.22	2.14	.82	.....	.....	G.	10.30
Total complete December 31, 1926				1762.30	1793.27	770.43	1370.51			
Complete month of December				30.43	44.34	21.54	33.95			
Total complete November 30, 1926				1731.87	1748.93	748.89	1336.56			

TOTAL MILEAGE COMPLETE

	Concrete	Brick	B. C.	S. A.	B. M.	Asph. Block	S. T.	S. C.	Marl	Total
Complete to Nov. 30, 1926	121.71	17.15	10.74	74.79	89.07	23.20	557.50	471.29	45.86	1410.41
Complete month of December	7.34	.....	.....	1.08	.....	.....	23.28	2.91	.....	34.61
Total to Dec. 31, 1926	129.05	17.15	10.74	75.87	89.07	23.20	580.78	474.20	45.86	1445.02

* Not reported.



**Keep 'em busy
every minute**

But, to do that, your SAND and GRAVEL shipments must come through on time. And every ton must be clean, correctly sized. ARROWHEAD means that—and

dependable deliveries

no trouble about that because we're geared up to serve big users. Our electrically operated plant produces these famous aggregates at rate of 4000 tons daily. Shipments to all South-east points.

4000 TONS A DAY

MONTGOMERY GRAVEL CO.

Offices:
Shepherd Bldg.
MONTGOMERY, ALA.

Plants:
ARROWHEAD, ALA.
MONTGOMERY, ALA.

The Contractors Equipment Co.

OF FLORIDA

DISTRIBUTORS

Rex Pavers—More yards per day
Rex Mixers—all sizes
Ord Concrete Road Finisher
Ingersoll-Rand Compressors
Ingersoll-Rand Tools and Hose
Barnes Road Pumps
Barnes Power Pumps
Jones Superior Saw Rigs
Essick Plaster Mixers
Syntrol Electric Hammers and Tools
Haiss Loaders and Conveyors
Chain Belt Co.—Chains and Sprockets
Goodyear Belt and Hose
Cable, Wheelbarrows, Carts, Shovels
Supplies

We stock parts and can give service

Miami	West Palm Beach	Jacksonville
	Phones	
3-1571	7564	.5-1861
Affiliated with McDonald & Burgman		

Reinforcing Bars for Concrete

Made in the United States
from new billet steel.

Intelligent, dependable service
by expert bridgemen.

Dudley Bar Company

BIRMINGHAM, ALA.

Wood Preservers Since 1878

Eppinger & Russell Co.

CREOSOTED

Forest Products of all kinds

Ties, Lumber, Piles, Poles, Cross Arms
for Railroads, Bridges, Docks, Fences,
and other purposes where permanent
construction is required.

Also Manufacturers and Dealers in
Yellow Pine and Cypress

Main Office: 165 Broadway, New York
Branch Office: Jacksonville, Fla.
Plants at Jacksonville, Fla.
Long Island City, N. Y.

Information and Quotations Cheerfully Given.
Address Nearest Office.

If "Specifications" *were Specific—*

—there might be more Lime-Rock streets in Florida cities, lower costs for street maintenance, less need for frequent tearing up and re-laying.

Public officials and highway contractors answer the public demand. Since the taxpayer pays the cost, the taxpayer's preference is considered.

Old streets had no chance to have a Lime-Rock base—which is one reason why they are "old." Lime-Rock has been available only a comparatively few years. But today this all-Florida material comes from the mines at the rate of 30,000 tons a day—to make NEW streets which will hold their youth for years!

Taxpayers gain great benefits in economy when street specifications say "Lime-Rock Base." Government and state engineers, and eminent scientific laboratories commend it.

Lime Rock Is the Life of the Highway

A FLORIDA PRODUCT

FLORIDA
LIME ROCK
ASSOCIATION

P. O. Box 1081

JACKSONVILLE, FLORIDA